



CRITICAL AREAS STUDY & BUFFER MITIGATION PLAN FOR

Walsh Hills – 1711 Terrace Avenue

Tax Parcel Nos. 28060700103600 & 28060800202100

Acre Project #19065

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ATTACHMENTS:

1. WETLAND DETERMINATION DATA FORMS (10 DATA POINTS ON-SITE)
2. WETLAND RATING FORMS FOR WESTERN WASHINGTON: 2014 UPDATE (4 RATING FORMS)
3. CRITICAL AREAS STUDY & MITIGATION MAP SHEET CA1.00

SITE DESCRIPTION

On January 21, 2020, April 15, 2020, and July 15, 2020 *Acre Environmental Consulting, LLC* visited the approximate 19.3-acre site located at 1711 Terrace Avenue (County parcel 28060700103600) in the City of Snohomish, Washington. This site also includes an adjacent property downstream of the site and under the same ownership, adjacent to Machias Road Avenue (County parcel 28060800202100). The site is further located as a portion of Section 07, Township 28N, Range 6E, W.M. The eastern portion of parcel 28060800202100 located east of Machias Road is located in Snohomish County. 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 single-family residential development and forest land.

Access to the site is from the west via Terrace Avenue which is located along the western border of the property. The western portion of this site is relatively flat and contains the Delta Rehabilitation Center housed in a sprawling collection of buildings. The adjacent area is comprised of parking, maintained lawn, and landscaping. The eastern part of this site is forested with a steep east aspect which grades to Machias Road located along the eastern border of the property. A total of four wetlands and two streams are located on the subject site. Wetland A and Wetland B are located in the eastern part of the property on the steep slope. These Category III wetlands are respectively associated with Stream A and Stream B (Type Ns streams). Wetland C is a small Category III wetland located in the northwestern corner of the property and extending off-site to the north. Wetland D is a Category II wetland located offsite and southeast of the intersection of Machias and Three Lakes Roads, and west of the Centennial Trail. Wetland D is located outside of the City of Snohomish within Snohomish County's Jurisdiction.

Wetlands A, B, and D received 7 points for Habitat Functions on the DOE Wetland Rating Form for Western Washington: 2014 Update. Wetland C received 5 points for habitat functions on the DOE rating form.

In the City of Snohomish, Category III wetlands with moderate habitat scores (6 to 7 points), receive 100-foot standard buffers measured from the delineated edge. Category III wetlands with low habitat scores (3 to 5 points), receive 60-foot standard buffers. Type Ns streams receive 35-foot buffers measured in a landward direction from the delineated ordinary high water mark.

In Snohomish County, Category II wetlands with moderate habitat scores (6 to 7 points) adjacent to moderate intensity land use (residential use of less than 4 units per acre) receive 110-foot standard buffers.

PROJECT DESCRIPTION

The applicant is proposing to construct a multi lot residential subdivision on the western portion of the subject site. This project has been designed to avoid impacts to the vast majority of critical areas on the property.

To accommodate the proposed development adjacent to Wetland C, the applicant intends to reduce a portion of the buffer of this wetland through buffer averaging as allowed by SMC 14.260.060(E)(4). The applicant is proposing to reduce a total of 3,575 square feet of wetland buffer adjacent to proposed lots 1, 2, and 113. This will result in a minimum buffer width of 31 feet adjacent to Wetland B (greater than the minimum allowed fifty percent). The buffer proposed to be reduced is dominated by Himalayan blackberry (*Rubus armeniacus*, Fac) and as a result, provides a relatively low level of functions and values. As mitigation for this buffer reduction, the applicant is proposing to designate a total of 4,458 square feet of equivalent or better quality area as buffer on the subject site. This will result in a net gain of 883 square feet of buffer on the property. The area proposed to be designated as additional buffer is currently comprised of Himalayan blackberry or maintained lawn. To ensure an increase in the level of functions and values the applicant is proposing to enhance the entire on-site portion of Wetland C (2,172 square feet) as well as the entire 14,315 square feet of on-site buffer (this includes the 4,458 square feet of area designated as additional buffer).

In addition to the proposed wetland and buffer enhancement, the applicant intends to install a two rail fence and critical areas signs around the perimeter of the buffer of Wetland C. The signs and fencing will serve to demarcate the limits of the development and discourage intrusion in to the adjacent critical areas.

Buffer averaging will not diminish the functions and values of Wetland C or its associated buffer. This proposal will replace the reduced buffer with additional, equivalent quality buffer at a better than 1:1 ratio of buffer reduction to buffer addition. Furthermore, the applicant is proposing to enhance the entire wetland and averaged buffer which are currently degraded, dominated by invasive species, provide a low level of functions and values, and in the case of the buffer, provide minimal protection to the wetland. Wetland and buffer enhancement are proposed to consist of removing invasive species and planting native trees and shrubs. Overall, the proposed buffer reduction and buffer averaging combined with wetland and buffer enhancement are expected to provide a net improvement in the overall level of functions and values provided by this site. Furthermore, this work is expected to achieve a greater level of functions and values in this wetland and buffer than could be achieved by avoiding all impacts to the standard buffer and leaving these areas in their current degraded condition.

COMPLIANCE WITH SMC 14.260.060(E)(4) (BUFFER REDUCTION & BUFFER AVERAGING)

Buffer reduction and buffer averaging may be used in conjunction with each other on the same site; provided, that there is no loss of function and the original buffer width is not reduced by more than fifty (50) percent. Per SMC 14.260.060(E)(2) and (3), buffer widths may be reduced through buffer reduction or buffer averaging when all of the following conditions are met. The City requirements are in italics while the way this project is in compliance with these requirements is described in plain text:

There is no practical alternative site design that would allow reasonable development of the site that completely avoids the need to reduce the buffer.

While it is possible to avoid the need to reduce the buffer by re-designing the site layout, this would eliminate the opportunity for the applicant to enhance this currently degraded wetland and buffer. Improving the overall level of functions and values of Wetland C and its associated buffer by removing invasive species and planting native trees and shrubs is consistent with best available science and is expected to result in an increase in the level of functions and values of this wetland and buffer as well as an aesthetic improvement. If the site layout were re designed to avoid the need to reduce the buffer, both the wetland and buffer would continue to be dominated by invasive Himalayan blackberry and would provide a low level of functions and values for the foreseeable future.

Mitigation sequencing pursuant to SMC 14.260.080(A) demonstrates reducing buffer widths is necessary to allow development of the site.

The mitigation sequencing is as follows:

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

While it is possible to avoid the need to reduce or average the buffer by re-designing the site layout, this would eliminate the opportunity for the applicant to enhance this currently degraded wetland and buffer.

- 2. Minimize impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts.*

Buffer impacts have been limited only what is necessary to accommodate the site layout and allow the applicant to provide wetland and buffer enhancement. The impact areas have been limited to low functioning buffer that is currently dominated by invasive Himalayan blackberry or is comprised of maintained lawn.

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

The impact is proposed to be offset by designating additional, equivalent quality buffer at a better than 1:1 ratio of buffer impact to buffer addition, and enhancing all of Wetland C and its associated buffer by removing invasive species and planting native trees and shrubs.

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

Wetland C and its associated buffer will be preserved in perpetuity. The impact of the proposed buffer reduction and averaging is expected to be immediately offset by the designation of additional, equivalent quality buffer area as well as wetland and buffer enhancement.

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

The proposed buffer averaging and wetland and buffer enhancement is expected to more than compensate for the impact of reducing portions of the buffer adjacent to Wetland C.

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

Monitoring and maintenance provisions are included with this plan in compliance with SMC 14.260.080.

The areas where the buffer width reduction is more than twenty-five (25) percent are kept to a minimum.

The areas where the buffer width reduction is more than twenty-five percent have been kept to the minimum necessary to accommodate the site layout.

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

Wetland C is currently dominated by Himalayan blackberry while the associated buffer is represented by a combination of blackberry and maintained lawn. As a result of the existing low level of functions and values provided by this area and the proposed wetland and buffer enhancement, buffer averaging will not result in degradations of the wetland's functions and

values. In fact, the proposed buffer reduction and buffer averaging combined with wetland and buffer enhancement is expected to provide a net improvement in the overall level of functions and values provided by this site.

The total area of the buffer after averaging is equal to the area required without averaging.

The total area of the buffer after averaging will be greater than the buffer area required without averaging. Specifically, the proposed buffer averaging will result in a net increase of 883 square feet of buffer on the subject site.

Invasive species are removed from the areas where the buffer width is reduced and the areas are replanted to create the appropriate plant community for the ecoregion.

As part of the proposed wetland and buffer enhancement, all invasive species will be removed and replaced with native trees and shrubs. All of the species proposed for mitigation are native to the Puget Sound region and have been selected for their benefits to wildlife and their proven success on past mitigation projects.

A temporary irrigation system is operated in the areas that are replanted for a minimum of the first three (3) summers (June 1st through September 30th) following the planting.

Irrigation provisions are included with this plan and can be found in Planting Notes section of this report.

The buffer at its narrowest point is never less than either fifty (50) percent of the required width pursuant to Table 1 or fifty (50) feet for Category I and II wetlands, forty (40) feet for Category III wetlands, and twenty-five (25) feet for Category IV wetlands, whichever is greater.

The applicant is proposing buffer averaging for this project. Pursuant to SMC 14.260.060(E)(4), "Buffer reduction and buffer averaging may be used in conjunction with each other on the same site; provided, that there is no loss of function and the original buffer width is not reduced by more than fifty (50) percent". The applicant is proposing to reduce the buffer of Wetland C to a minimum of 31 feet. This is slightly less than the maximum fifty percent reduction.

METHODOLOGIES OF CRITICAL AREAS DETERMINATION

On January 21, 2020 and April 15, 2020 *Acre Environmental Consulting, LLC* conducted site visits 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, Snohomish County, and City of Snohomish requirements. At the time of our April 15, 2020 site investigation, the weather was cloudy with a temperature of 58 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 Snohomish requirements, *Acre Environmental Consulting, LLC* also assessed adjacent properties within 300 feet of the proposed project limits, to the maximum extent possible without entering adjacent properties. In Snohomish County, adjacent properties were assessed within 500 feet of the project limits. 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 300 feet of the subject site. This review is necessary 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 Snohomish Critical Areas Ordinance, Chapter 14.260 (Wetlands) and the the Snohomish County Critical Areas Ordinance, Chapter 30.62A (Wetlands and Fish and Wildlife Habitat Conservation Areas). As applicable, buffers are also determined by these chapters.

Wetland A

HGM Class: Slope

Cowardin: Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Seasonally Flooded /Saturated (PSS1E)

Ecology Rating: Category III

City of Snohomish Rating: Category III, 100' Buffer

Wetland A is located on steep slopes in the northeastern corner of the property and extends off-site to the north. This hydrogeomorphic (HGM) class slope wetland is associated with Stream A and received a total score for functions of 16 points (5 points for Water Quality Functions, 4 points for Hydrologic Functions, and 7 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 SMC 14.260.060. In the City of Snohomish, Category III wetlands with moderate habitat scores (6 to 7 points) receive a 100-foot standard buffer measured from the delineated edge. The buffer from this wetland is superseded by the adjacent slope setbacks.

Vegetation in this wetland is represented by a sparse canopy of red alder (*Alnus rubra*, Fac) with salmonberry (*Rubus spectabilis*, Fac), red elderberry (*Sambucus racemosa*, FacU), Devil's club (*Oplopanax horridus*, Fac), piggy-back plant (*Tolmiea menziesii*, Fac), lady fern (*Athyrium filix-femina*, Fac), and skunk cabbage (*Lysichiton americanus*, Obl), in the understory. Typical soils in this wetland have a Munsell color of very dark gray (10YR 3/1) with redoximorphic features of dark grayish brown (10YR 4/2), and a texture of silt loam from 0 to 18 inches below the surface. Soils in this wetland were saturated at 2 inches below the surface during our April 15, 2020 site visit.

Wetland B

HGM Class: Slope

Cowardin: Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Seasonally Flooded /Saturated (PSS1E)

Ecology Rating: Category III

City of Snohomish Rating: Category III, 100' Buffer

Wetland B is located on steep slopes in the east central portion of the property. This hydrogeomorphic (HGM) class slope wetland is associated with Stream B and received a total score for functions of 16 points (5 points for Water Quality Functions, 4 points for Hydrologic Functions, and 7 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 SMC 14.260.060. In the City of Snohomish, Category III wetlands with moderate habitat scores (6 to 7 points) receive a 100-foot standard buffer measured from the delineated edge. The buffer from this wetland is superseded by the adjacent slope setbacks.

Vegetation in this wetland is dominated by salmonberry (*Rubus spectabilis*, Fac), lady fern (*Athyrium filix-femina*, Fac), and skunk cabbage (*Lysichiton americanus*, Obl). Typical soils in this wetland have a Munsell color of very dark gray (10YR 3/1) with redoximorphic features of dark grayish brown (10YR 4/2), and a texture of silt loam from 0 to 18 inches below the surface. Soils in this wetland were saturated to the surface during our April 15, 2020 site visit.

Wetland C

HGM Class: Depressional

Cowardin: Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Seasonally Flooded /Saturated (PSS1E)

Ecology Rating: Category III

City of Snohomish Rating: Category III, 60' Buffer

Wetland C is located in the northwestern corner of the property and extends off-site to the north. This hydrogeomorphic (HGM) class depressional wetland received a total score for functions of 18 points (7 points for Water Quality Functions, 6 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 SMC 14.260.060. In the City of Snohomish, Category III wetlands with low habitat scores (3 to 5 points) receive a 60-foot standard buffer measured from the delineated edge.

Vegetation in this wetland is dominated by Himalayan blackberry (*Rubus armeniacus*, Fac) with lesser amounts of Sitka willow (*Salix sitchensis*, FacW), colonial bentgrass (*Agrostis capillaris*, Fac), and creeping buttercup (*Ranunculus repens*, Fac). 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 silt loam from 0 to 18 inches below the surface. Soils in this wetland were saturated to the surface during our April 15, 2020 site visit.

Wetland D

HGM Class: Depressional

Cowardin: Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Seasonally Flooded /Saturated (PSS1E)

Ecology Rating: Category II

Snohomish County Rating: Category II, 110' Buffer

Wetland D is located southeast of the intersection of Machais and Three Lakes Roads, and west of the Centennial Trail. Wetland D is located outside of the City of Snohomish and within the Jurisdiction of Snohomish County. This hydrogeomorphic (HGM) class depressional wetland received a total score for functions of 21 points (8 points for Water Quality Functions, 6 points for Hydrologic Functions, and 7 points for Habitat Functions) on the DOE Wetland Rating Form for Western Washington: 2014 Update. Wetlands with scores between 20 and 22 points for all functions are classified as Category II wetlands per SCC 30.62A.320(1)(a). In Snohomish County, Category II wetlands with moderate habitat scores (6 to 7 points) adjacent to moderate intensity land use (residential use of less than 4 units per acre), receive a 110-foot standard buffer measured from the delineated edge.

Vegetation in this wetland is represented by Sitka willow (*Salix sitchensis*, FacW), red osier dogwood (*Cornus alba*, FacW), hardhack (*Spiraea douglasii*, FacW), black twinberry (*Lonicera involucrata*, Fac), and skunk cabbage (*Lysichiton americanus*, Obl). 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 silt loam from 0 to 18 inches below the surface.

While there is evidence of ponding throughout the wetland, soils in this wetland were saturated to the surface during our April 15, 2020 site visit.

Streams A and B – Type Ns

Cowardin: Riverine, Intermittent, Streambed (R4SB)

City of Snohomish Rating: Type Ns stream, 35' Buffer

These unnamed streams emerge from hillside seeps associated with Wetlands A and B, flow east through these wetlands, and off-site to the east. These streams are not mapped by the City of Snohomish or any other mapping resource. Due to gradient and a lack of in stream habitat features, these streams do not appear to provide habitat for fish. In the City of Snohomish, Type Ns streams typically receive 35-foot protective buffers measured horizontally in a landward direction from the delineated ordinary high water mark (OHWM).

Non - Wetland

Typical vegetation across this site is represented by maintained lawn and residential landscaping in the west and forest in the east. Vegetation in the lawn is represented by colonial bentgrass (*Agrostis capillaris*, Fac), white clover (*Trifolium repens*, Fac), and spear moss (*Calliergonella cuspidate*, Upl). Typical vegetation in the forest is represented by a canopy of big leaf maple (*Acer macrophyllum*, FacU), western hemlock (*Tsuga heterophylla*, FacU), western red cedar (*Thuja plicata*, Fac), and red alder (*Alnus rubra*, Fac), with vine maple (*Acer circinatum*, Fac), Himalayan blackberry (*Rubus armeniacus*, Fac), hazelnut (*Corylus cornuta*, FacU), osoberry (*Oemleria cerasiformis*, FacU), salmonberry (*Rubus spectabilis*, Fac), red huckleberry (*Vaccinium parvifolium*, FacU), thimbelberry (*Rubus parviflorus*, FacU), Cascade Oregon-grape (*Mahonia nervosa*, FacU), sword fern (*Polystichum munitum*, FacU), and stinging nettle (*Urtica dioica*, Fac), in the understory. Typical soils in the non-wetland portions of the site have Munsell colors ranging from very dark grayish brown (10YR 3/2) to dark yellowish brown (10YR 4/4), with textures of silt loam to gravelly sandy loam, from 0 to 18 inches below the surface. Soils in the non-wetland areas were moist throughout the profile during our April 15, 2020 site visit.

NATURAL RESOURCE CONSERVATION SERVICE SOILS DESCRIPTION:

The Natural Resources Conservation Service (NRCS) mapped the subject property as being underlain by Tokul gravelly medial loam, 0 to 8 percent slopes in the western portion of the property with Tokul-Winston gravelly loams, 25 to 65 percent slopes in the eastern part of the property in the vicinity of the steep slopes. East of Machias Road in Wetland D, soils are mapped as Puget silty clay loam.

The NRCS describes Tokul Gravelly medial Loam as a moderately deep, moderately well drained soil on till plains. This soil formed in glacial till and volcanic ash. Typically, the surface is covered with a mat of leaves, twigs, and decomposed litter about 2 inches thick. The surface layer is dark brown gravelly loam about 4 inches thick. The subsoil is brown, strong brown, and dark yellowish brown gravelly loam about 18 inches thick. A hardpan is at a depth of about 31 inches. Permeability of this soil is moderate to the hardpan and very slow through it. Available water capacity is moderate. Included in this unit are small areas of Pastik and Winston soils on terraces and outwash plains; Nargar soils on high terraces, terrace escarpments, and outwash plains; and Ragnar soils on outwash plains. Included areas make up about 25 percent of the total acreage.

Tokul – Winston gravelly loam, 25 to 65 % slopes is located on till plains and terrace escarpments. This unit is about 50 percent Tokul gravelly loam and about 30 percent Winston gravelly loam. Included in this unit are soils that are similar to the Tokul soil but do not have a hardpan; however, they are underlain by compact glacial till at a depth of 20 to 40 inches. Also included are small areas of Pastik soils on terraces and Ragnar soils on outwash plains. Included areas make up about 20 percent of the total acreage. Permeability of the Tokul soil is moderate to the hardpan and very slow through it. Available water capacity is moderate. Permeability of the Winston soil is moderate to the lower part of the substratum and very rapid through it. Available water capacity is low.

The NRCS describes Puget silty clay loam as a very deep soil in depressional areas on flood plains. It has been artificially drained. The soil formed in alluvium. Typically, the surface layer is dark grayish brown silty clay loam about 9 inches thick. The underlying material to a depth of 60 inches or more is olive gray and gray silty clay loam. In some areas the soil is not drained and is not protected from flooding. Included in this unit are areas of Snohomish, Sumas, Sultan, and Pilchuck soils on flood plains and Puyallup soils on stream terraces. Puget, Snohomish, and Sumas, soils are included on the [Hydric Soils List for Washington](#).

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 on-site wetlands, streams, 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.

The wetlands and buffers on the subject site provides a low to moderate level of functions and values.

Wetlands A and B are hydrogeomorphic class slope wetlands. As such, these features have a limited ability to retain stormwater. Due to the slope, rather than being stored in this wetland, water is released relatively quickly to downstream systems. Therefore, Wetlands A and B provide limited stormwater storage functions.

Wetlands C and D are hydrogeomorphic class depressional wetlands. As such, these wetlands have the potential to retain large quantities of stormwater and provide important water quality functions. These functions are increased by lack of surface water outlets in these wetlands. The functions of Wetland C are limited by its small size and relative isolation from other features.

Wetlands in western Washington often contain necessary wildlife habitat resources such as food, water, thermal cover, and hiding cover in close proximity. The subject wetlands and associated buffers provide protected habitat, which becomes increasingly important as areas become further populated with humans and habitat areas become fragmented. The subject wetlands provide low to moderate levels of habitat for wildlife species as evidenced by Habitat Function scores on the Wetland Rating Form for Western Washington: 2014 Update of 7 for Wetlands A, B, and D, and 5 for Wetland C. During our site visit an American Crow (*Corvus brachyrhynchos*), a black-capped chickadee (*Poecile atricapillus*), dark-eyed junco (*Junco hyemalis*), and signs of Columbian black-tailed deer (*Odocoileus hemionus columbianus*), were noted in the subject wetlands and buffer.

The dense vegetation within 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.

The on-site Type Ns streams provide important functions to the surrounding environment such as hydrological transport, transport of solids (suspended and dissolved), and important habitat features, among other functions. The portions of the site adjacent to the streams (vegetated wetland and associated buffers, etc.) are increasingly important to manage appropriately as these areas aid in water quality and hydrologic control, resulting in cleaner water entering the stream's channel.

WETLAND & BUFFER ENHANCEMENT

As mitigation for the proposed buffer reduction and buffer averaging, and to ensure an increase in the level of functions and values provided by this site, the applicant is proposing to enhance the entire on-site portion of Wetland C (2,172 square feet) and 14,315 square feet of adjacent buffer (this includes the 4,458 square feet of area designated as additional buffer). Wetland C is currently dominated by Himalayan blackberry while the associated buffer is represented by a combination of blackberry and maintained lawn. Buffer enhancement will consist of removing invasive species and planting native trees and shrubs. Some existing, native vegetation is located within the wetland and buffer enhancement areas. Mitigation plantings should be adjusted in the field to account for the existing native plants. 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 will be installed within the buffer enhancement areas.

Wetland Enhancement – 2,172 square feet

Common Name	Latin Name	Size	Spacing	Quantity
Sitka spruce	<i>Picea sitchensis</i>	1 gallon	10'	7
Western red cedar	<i>Thuja plicata</i>	1 gallon	10'	7
Pacific willow	<i>Salix lasiandra</i>	Whips	3'	48
Sitka willow	<i>Salix sitchensis</i>	Whips	3'	48

Note: If the proposed mitigation is installed when whips are not viable or available, these may be substituted with 21 1-gallon pots of Pacific willow and 21 1-gallon pots Sitka willow on five foot centers.

Buffer Enhancement – 14,315 square feet

Common Name	Latin Name	Size	Spacing	Quantity
Western red cedar	<i>Thuja plicata</i>	1 gallon	10'	43
Douglas fir	<i>Pseudotsuga menziesii</i>	1 gallon	10'	43
Salal	<i>Gaultheria shallon</i>	1 gallon	5'	45
Hazelnut	<i>Corylus cornuta</i>	1 gallon	5'	45
Osoberry	<i>Oemleria cerasiformis</i>	1 gallon	5'	45
Snowberry	<i>Symphoricarpos albus</i>	1 gallon	5'	45
Baldhip rose	<i>Rosa gymnocarpa</i>	1 gallon	5'	45

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

Wetland and buffer mitigation projects are typically more complex to install than can be described in plans. Careful monitoring by a professional wetland scientist for all portions of this project is strongly recommended. Timing and sequencing is important to the success of this type of project.

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 (June 1st through September 30th) for the first three 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:

- Increase the water quality and habitat functions within the on-site Wetland C and its buffer;
- Increase vegetative structure within the on-site Wetland C and its buffer;
- Increase the quantity and diversity of native vegetation within the on-site Wetland C and its buffer; and
- Allow for responsible development and associated infrastructure, while increasing 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 20 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. If the definition of success is not met for any reason at the end of the five-year monitoring period, the maintenance and monitoring period will be extended for one year at a time until the site meets the stated performance standards. The amount of the surety may be reduced after year three (3) of the monitoring period if new cost estimates are provided and approved by the Planning Director. This mitigation plan and the accompanying maintenance and monitoring will not be considered fully complete until written confirmation is received from the City of Snohomish.

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 Snohomish 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 Snohomish 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 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

If 20% of the plants are severely stressed during any of the inspections, or it appears 20% may not survive, additional plantings of the same species may be added to the planting area. Elements of a contingency plan may include, but will not be limited to: more aggressive weed control, pest control, mulching, replanting with larger plant material, species substitution, fertilization, soil amendments, and/or irrigation.

MAINTENANCE BONDING

A maintenance surety shall be provided to the City of Snohomish for a period of five years from the completion of the project, in the amount of fifty percent of the total cost of the mitigation plan as approved by the City. Annual monitoring reports and seasonal maintenance will be required to assure the success of this enhancement plan. The amount of the surety may be reduced after year three (3) of the monitoring period if new cost estimates are provided and approved by the Planning Director. The City shall release this bond at the end of five years, only upon successful determination for all portions of this mitigation project. The following is an estimate of plant materials and labor only. This does not represent a bid to install:

QUANTITY OF ONE GALLON PLANTS @ \$10.50 PER PLANT	325
QUANTITY OF WHIPS @ \$3.00 PER WHIP	96
ESTIMATED COST OF PLANT MATERIAL AND LABOR	\$3,700.50
ESTIMATED COST OF GRASS SEED	\$25.00
ESTIMATED COST OF MAINTENANCE (For five years)	\$6,000.00
ESTIMATED COST OF MONITORING (For five years)	\$6,000.00
TOTAL ESTIMATED COSTS	\$15,725.50
TOTAL BOND AMOUNT (50% OF TOTAL ESTIMATED COSTS)	\$7,862.75

POST-PROJECT FUNCTIONS AND VALUES

Although impacts within the buffer of Wetland C are proposed to accommodate the development, no net loss of ecological functions is expected to occur. The proposed wetland and 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 wetland and buffer enhancement is expected to generally increase the overall level of functions and values provided by the subject site. Furthermore, this work is expected to achieve a greater level of functions and values in this wetland and buffer than could be achieved by avoiding all impacts to the standard buffer.

TERMS & CONDITIONS

The environmental consulting work conducted, including this Critical Areas Study (collectively the “Services”) is supplied to D.R. Horton (the “Client”) as a means of determining whether any wetlands, streams, and/or fish and wildlife habitats regulated by the City of Snohomish and Snohomish County 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

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

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Snohomish County Planning and Development Services PDS Map Portal. <http://gismaps.snoco.org/Html5Viewer/Index.html?viewer=pdsmappointal>. Website last visited on May 14, 2020.

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. Fish and Wildlife Service. National Wetlands Inventory Wetlands Mapper. <http://107.20.228.18/Wetlands/WetlandsMapper.html#>. Last modified May 1, 2020. Website last visited on May 13, 2020.

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

Project/Site: Walsh Hills 1711 Terrace Avenue City/County: Snohomish / Snohomish Sampling Date: 04.15.20
 Applicant/Owner: D.R. Horton State: WA Sampling Point: DP1
 Investigator(s): Louis Emenhiser Section, Township, Range: S7, T28N, R6E, W.M.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 32 %
 Subregion (LRR): LRR-A Lat: 47.934438 Long: -122.077816 Datum: _____
 Soil Map Unit Name: Tokul-Winston gravelly loams, 25 to 65 percent slopes. NWI classification: PSS1E

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

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Alnus rubra</u>	20	Y	Fac	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</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>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
20 = Total Cover				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 = _____
Sapling/Shrub Stratum	(Plot size: <u>10 meters</u>)			
1. <u>Rubus spectabilis</u>	90	Y	Fac	
2. <u>Sambucus racemosa</u>	5	N	FacU	
3. <u>Oplopanax horridus</u>	5	N	Fac	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
100 = Total Cover				
Herb Stratum	(Plot size: <u>1 meter</u>)			
1. <u>Lysichiton americanus</u>	10	Y	Obl	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.
2. <u>Athyrium filix-femina</u>	10	Y	Fac	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
20 = Total Cover				
Woody Vine Stratum	(Plot size: _____)			
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				

Remarks:

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

Project/Site: Walsh Hills 1711 Terrace Avenue City/County: Snohomish / Snohomish Sampling Date: 04.15.20
 Applicant/Owner: D.R. Horton State: WA Sampling Point: DP2
 Investigator(s): Louis Emenhiser Section, Township, Range: S7, T28N, R6E, W.M.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 41 %
 Subregion (LRR): LRR-A Lat: 47.934065 Long: -122.077505 Datum: _____
 Soil Map Unit Name: Tokul-Winston gravelly loams, 25 to 65 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 _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Non wetland between Wetland A and Wetland B.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer macrophyllum</u>	60	Y	FacU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>28</u> (A/B)														
2. <u>Tsuga heterophylla</u>	20	Y	FacU															
3. <u>Thuja plicata</u>	10	N	Fac															
4. _____	90	= Total Cover																
Sapling/Shrub Stratum (Plot size: <u>10 meters</u>)																		
1. <u>Acer circinatum</u>	30	Y	Fac	Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>130</u></td> <td>x 4 = <u>520</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>180</u> (A)</td> <td><u>670</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>3.72</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>130</u>	x 4 = <u>520</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>180</u> (A)	<u>670</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>50</u>	x 3 = <u>150</u>																	
FACU species <u>130</u>	x 4 = <u>520</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>180</u> (A)	<u>670</u> (B)																	
2. <u>Rubus spectabilis</u>	10	Y	FacU															
3. <u>Corylus cornuta</u>	10	Y	Fac															
4. <u>Oemleria cerasiformis</u>	10	N	FacU															
5. <u>Vaccinium parvifolium</u>	10	N	FacU															
70 = Total Cover																		
Herb Stratum (Plot size: <u>1 meter</u>)																		
1. <u>Mahonia nervosa</u>	10	Y	FacU	Hydrophytic Vegetation Indicators: ___ 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.														
2. <u>Polystichum munitum</u>	10	Y	FacU															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
20 = Total Cover																		
Woody Vine Stratum (Plot size: _____)																		
1. _____				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>														
2. _____																		
_____ = Total Cover																		
% Bare Ground in Herb Stratum _____																		

Remarks:

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

Project/Site: Walsh Hills 1711 Terrace Avenue City/County: Snohomish / Snohomish Sampling Date: 04.15.20
 Applicant/Owner: D.R. Horton State: WA Sampling Point: DP3
 Investigator(s): Louis Emenhiser Section, Township, Range: S7, T28N, R6E, W.M.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 40 %
 Subregion (LRR): LRR-A Lat: 47.933640 Long: -122.077365 Datum: _____
 Soil Map Unit Name: Tokul-Winston gravelly loams, 25 to 65 percent slopes. NWI classification: PSS1E

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

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	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>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				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>Sapling/Shrub Stratum</u> (Plot size: <u>10 meters</u>)				
1. <u>Rubus spectabilis</u>	90	Y	Fac	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
90 = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>1 meter</u>)				
1. <u>Lysichiton americanus</u>	20	Y	Obl	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.
2. <u>Athyrium filix-femina</u>	10	Y	Fac	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
30 = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = 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.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/1	95	10YR 4/2	5	c	m	sil	

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

Project/Site: Walsh Hills 1711 Terrace Avenue City/County: Snohomish / Snohomish Sampling Date: 04.15.20
 Applicant/Owner: D.R. Horton State: WA Sampling Point: DP4
 Investigator(s): Louis Emenhiser Section, Township, Range: S7, T28N, R6E, W.M.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 14 %
 Subregion (LRR): LRR-A Lat: 47.933741 Long: -122.078653 Datum: _____
 Soil Map Unit Name: Tokul-Winston gravelly loams, 25 to 65 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Non wetland in abandoned pasture (SE portion of the site).	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer macrophyllum</u>	10	Y	FacU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</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>66</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>10</u> = Total Cover				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>Sapling/Shrub Stratum</u> (Plot size: <u>10 meters</u>)				
1. <u>Rubus armeniacus</u>	50	Y	Fac	
2. <u>Alnus rubra</u>	30	Y	Fac	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>80</u> = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>1 meter</u>)				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.
1. <u>Ranunculus repens</u>	30	Y	Fac	
2. <u>Athyrium filix-femina</u>	20	Y	Fac	
3. <u>Calliergonella cuspidate</u>	20	Y	Upl	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>70</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>5</u>				

Remarks:

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

Project/Site: Walsh Hills 1711 Terrace Avenue City/County: Snohomish / Snohomish Sampling Date: 04.15.20
 Applicant/Owner: D.R. Horton State: WA Sampling Point: DP5
 Investigator(s): Louis Emehiser Section, Township, Range: S7, T28N, R6E, W.M.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 55 %
 Subregion (LRR): LRR-A Lat: 47.934065 Long: -122.078117 Datum: _____
 Soil Map Unit Name: Tokul-Winston gravelly loams, 25 to 65 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> _____
Remarks: Non wetland on the steep slope in the east central portion of the property.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer macrophyllum</u>	30	Y	FacU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</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>80</u> (A/B)
2. <u>Alnus rubra</u>	10	Y	Fac	
3. _____				
4. _____				
	40	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>10 meters</u>)				
1. <u>Rubus armeniacus</u>	50	Y	Fac	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 = _____
2. _____				
3. _____				
4. _____				
5. _____				
	50	= Total Cover		
Herb Stratum (Plot size: <u>1 meter</u>)				
1. <u>Phalaris arundinacea</u>	40	Y	FacW	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.
2. <u>Ranunculus repens</u>	30	Y	Fac	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	70	= Total Cover		
Woody Vine Stratum (Plot size: _____)				
1. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. _____				
% Bare Ground in Herb Stratum <u>5</u>				

Remarks:

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

Project/Site: Walsh Hills 1711 Terrace Avenue City/County: Snohomish / Snohomish Sampling Date: 04.15.20
 Applicant/Owner: D.R. Horton State: WA Sampling Point: DP6
 Investigator(s): Louis Emenhiser Section, Township, Range: S7, T28N, R6E, W.M.
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 3 %
 Subregion (LRR): LRR-A Lat: 47.934719 Long: -122.081099 Datum: _____
 Soil Map Unit Name: Tokul gravelly medial loam, 0 to 8 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> _____ Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> _____
Remarks: Non wetland in maintained lawn in the western part of the site.	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>1 meter</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Agrostis capillaris</u>	60	Y	Fac	
2. <u>Trifolium repens</u>	30	Y	Fac	
3. <u>Calliergonella cuspidate</u>	10	N	Upl	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100 = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = 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 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

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 = _____

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is $\bar{A}3.0^1$
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 _____ Wetland Non-Vascular Plants¹
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

Remarks:

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

Project/Site: Walsh Hills 1711 Terrace Avenue City/County: Snohomish / Snohomish Sampling Date: 04.15.20
 Applicant/Owner: D.R. Horton State: WA Sampling Point: DP7
 Investigator(s): Louis Emehiser Section, Township, Range: S7, T28N, R6E, W.M.
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 6 %
 Subregion (LRR): LRR-A Lat: 47.933791 Long: -122.082257 Datum: _____
 Soil Map Unit Name: Tokul gravelly medial loam, 0 to 8 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 _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Non wetland in maintained lawn in the western part of the site, between Terrace Ave. and the sidewalk.	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>1 meter</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Holcus lanatus</u>	<u>40</u>	<u>Y</u>	<u>Fac</u>	
2. <u>Agrostis capillaris</u>	<u>30</u>	<u>Y</u>	<u>Fac</u>	
3. <u>Ranunculus repens</u>	<u>10</u>	<u>N</u>	<u>Upl</u>	
4. <u>Trifolium repens</u>	<u>10</u>	<u>N</u>	<u>Fac</u>	
5. <u>Calliergonella cuspidate</u>	<u>10</u>	<u>N</u>	<u>Upl</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = 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 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

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 = _____

Hydrophytic Vegetation Indicators:
 ___ Dominance Test is >50%
 Prevalence Index is $\bar{A}3.0^1$
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Wetland Non-Vascular Plants¹
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

Remarks:

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

Project/Site: Walsh Hills 1711 Terrace Avenue City/County: Snohomish / Snohomish Sampling Date: 04.15.20
 Applicant/Owner: D.R. Horton State: WA Sampling Point: DP8
 Investigator(s): Louis Emenhiser Section, Township, Range: S7, T28N, R6E, W.M.
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1 %
 Subregion (LRR): LRR-A Lat: 47.934805 Long: -122.081442 Datum: _____
 Soil Map Unit Name: Tokul gravelly medial loam, 0 to 8 percent slopes. NWI classification: PSS1E

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

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</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>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				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 = _____
Sapling/Shrub Stratum (Plot size: <u>10 meters</u>)				
1. <u>Rubus armeniacus</u>	60	Y	Fac	
2. <u>Salix sitchensis</u>	30	Y	FacW	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	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.
90 = Total Cover				
Herb Stratum (Plot size: <u>1 meter</u>)				
1. <u>Agrostis capillaris</u>	20	Y	Fac	
2. <u>Ranunculus repens</u>	20	Y	Fac	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
40 = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				

Remarks:

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

Project/Site: Walsh Hills 1711 Terrace Avenue City/County: Snohomish / Snohomish Sampling Date: 04.15.20
 Applicant/Owner: D.R. Horton State: WA Sampling Point: DP9
 Investigator(s): Louis Emehiser Section, Township, Range: S7, T28N, R6E, W.M.
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 1 %
 Subregion (LRR): LRR-A Lat: 47.934719 Long: -122.081099 Datum: _____
 Soil Map Unit Name: Tokul gravelly medial loam, 0 to 8 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 _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: Non wetland south of Wetland C.	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Rubus armeniacus</u>	<u>60</u>	<u>Y</u>	<u>Fac</u>	
2. <u>Symphoricarpos albus</u>	<u>30</u>	<u>Y</u>	<u>FacU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>1 meter</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Calliergonella cuspidate</u>	<u>50</u>	<u>Y</u>	<u>Upl</u>	
2. <u>Ranunculus repens</u>	<u>30</u>	<u>Y</u>	<u>Fac</u>	
3. <u>Agrostis capillaris</u>	<u>10</u>	<u>N</u>	<u>Fac</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = 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: 4 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 0 x 1 = 0
 FACW species 0 x 2 = 0
 FAC species 100 x 3 = 300
 FACU species 30 x 4 = 120
 UPL species 50 x 5 = 250
 Column Totals: 180 (A) 670 (B)
 Prevalence Index = B/A = 3.72

Hydrophytic Vegetation Indicators:
 ___ Dominance Test is >50%
 Prevalence Index is $\bar{A}3.0^1$
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Wetland Non-Vascular Plants¹
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No

Remarks:

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

Project/Site: Walsh Hills 1711 Terrace Avenue City/County: Snohomish County Sampling Date: 04.15.20
 Applicant/Owner: D.R. Horton State: WA Sampling Point: DP10
 Investigator(s): Louis Emenhiser Section, Township, Range: S7, T28N, R6E, W.M.
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1 %
 Subregion (LRR): LRR-A Lat: 47.934503 Long: -122.076346 Datum: _____
 Soil Map Unit Name: Puget silty clay loam. NWI classification: PSS1E

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

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	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>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				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>Sapling/Shrub Stratum</u> (Plot size: <u>10 meters</u>)				
1. <u>Salix sitchensis</u>	<u>50</u>	<u>Y</u>	<u>FacW</u>	
2. <u>Cornus alba</u>	<u>30</u>	<u>Y</u>	<u>FacW</u>	
3. <u>Spiraea douglasii</u>	<u>10</u>	<u>N</u>	<u>FacW</u>	
4. <u>Lonicera involucrata</u>	<u>10</u>	<u>N</u>	<u>Fac</u>	
5. _____	_____	_____	_____	
_____ = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>1 meter</u>)				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.
1. <u>Lysichiton americanus</u>	<u>20</u>	<u>Y</u>	<u>Obl</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks:				

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

Project/Site: Walsh Hills 1711 Terrace Avenue City/County: Snohomish / Snohomish Sampling Date: 07.15.20
 Applicant/Owner: D.R. Horton State: WA Sampling Point: DP11
 Investigator(s): Louis Emenhiser Section, Township, Range: S7, T28N, R6E, W.M.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 35 %
 Subregion (LRR): LRR-A Lat: 47.934601 Long: -122.077181 Datum: _____
 Soil Map Unit Name: Tokul-Winston gravelly loams, 25 to 65 percent slopes. NWI classification: PSS1E

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

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>30 meters</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</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>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				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>Sapling/Shrub Stratum</u> (Plot size: <u>10 meters</u>)				
1. <u>Rubus spectabilis</u>	<u>90</u>	<u>Y</u>	<u>Fac</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>90</u> = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>1 meter</u>)				
1. <u>Equisetum arvense</u>	<u>30</u>	<u>Y</u>	<u>Fac</u>	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.
2. <u>Tolmiea menziesii</u>	<u>30</u>	<u>Y</u>	<u>Fac</u>	
3. <u>Athyrium filix-femina</u>	<u>20</u>	<u>Y</u>	<u>Fac</u>	
4. <u>Lysichiton americanus</u>	<u>20</u>	<u>Y</u>	<u>Obl</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>100</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				

Remarks:

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Terrace Ave. Wet A Date of site visit: 9.20.19
 Rated by: Lin Ewenhiser Trained by Ecology? Yes No Date of training: 9.30.19
 HGM Class used for rating: Slope Wetland has multiple HGM classes? Yes No

NOTE: Form is not complete without the figures requested (figures can be completed).
 Source of base aerial photo/map: EDS Map Portal Google Earth

OVERALL WETLAND CATEGORY III based on functions or special characteristics

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Circle the appropriate ratings		
	Improving Water Quality	Hydrologic	Habitat
Site Potential	H M <u>L</u>	H M <u>L</u>	H M <u>L</u>
Landscape Potential	H M <u>L</u>	H M <u>L</u>	H M <u>L</u>
Value	<u>H</u> M L	H <u>M</u> L	H M <u>L</u>
Score Based on Ratings	<u>5</u>	<u>4</u>	<u>7</u>
TOTAL			16

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

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Boge	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Intertidal	I II III IV
None of the above	<input checked="" type="checkbox"/>

Wetland Rating System for Western WA, 2014 Update
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1

Wetland name or number A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Common plant classes	0.1, H.1.1, H.1.4	
Hydroperiods	0.1, H.1.2	
Location of outlet (can be added to map of hydroperiods)	0.1.1, 0.4.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	0.2.1, 0.5.2	
Map of the contributing basin	0.4.3, 0.5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and unobstructed habitat	H.2.1, H.2.2, H.2.3	
Screen capture of map of 300-ft level waters in basin (from Ecology website)	B.3.1, B.3.2	
Screen capture of list of TWDLs for WRIA in which unit is found (from web)	D.3.3	

Riverline Wetlands

Map of:	To answer questions:	Figure #
Common plant classes	H.1.1, H.1.4	
Hydroperiods	H.1.2	
Flow/drainage directions	R.1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R.2.4	
Plant cover of trees, shrubs, and herbaceous plants	H.1.2, H.4.2	
Width of unit vs. width of stream (can be added to another figure)	R.4.1	
Map of the contributing basin	R.2.2, R.3.3, R.5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and unobstructed habitat	H.2.1, H.2.2, H.2.3	
Screen capture of map of 300-ft level waters in basin (from Ecology website)	R.3.1	
Screen capture of list of TWDLs for WRIA in which unit is found (from web)	R.3.2, R.3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Common plant classes	L.1.1, L.4.1, H.1.1, H.1.4	
Plant cover of trees, shrubs, and herbaceous plants	L.1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L.2.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and unobstructed habitat	H.2.1, H.2.2, H.2.3	
Screen capture of map of 300-ft level waters in basin (from Ecology website)	L.3.1, L.3.2	
Screen capture of list of TWDLs for WRIA in which unit is found (from web)	L.3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Common plant classes	H.1.1, H.1.4	
Hydroperiods	H.1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S.1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (can be added to figure above)	S.4.1	
Boundary of 150 ft buffer (can be added to another figure)	S.2.3, S.5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and unobstructed habitat	H.2.1, H.2.2, H.2.3	
Screen capture of map of 300-ft level waters in basin (from Ecology website)	S.3.1, S.3.3	
Screen capture of list of TWDLs for WRIA in which unit is found (from web)	S.3.3	

Wetland Rating System for Western WA, 2014 Update
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2

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)

YES - Freshwater Tidal Fringe
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.

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 your 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 30% 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?

The wetland is on a slope (slope can be very gradual).
 The water flows through the wetland in one direction (unidirectional) and usually comes from one source. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
 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 type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 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

NO - go to 6

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 water, 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, sweps 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.

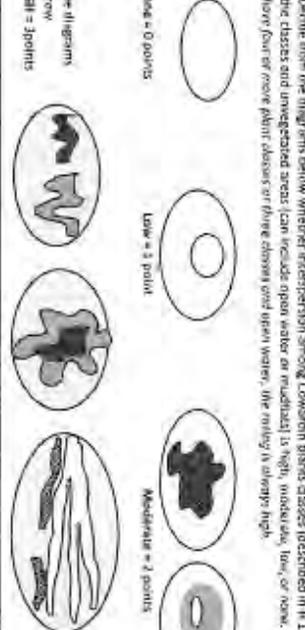
NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of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

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat		
H 1.0. Does the site have the potential to provide habitat?	<p>H 1.1. Structure of plant community. Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 points may be deducted for each class to meet the threshold of 8 or more than 10% of the wet if it is simpler than 2.5 or. Add the number of structures checked.</p> <p><input type="checkbox"/> Emergent <input checked="" type="checkbox"/> Scrub shrub (areas where shrubs have > 50% cover) <input checked="" type="checkbox"/> Forested forest where trees have > 20% cover (If the unit has a Forested class, check if: - The Forested class has 3 out of 5 strata (Lancey, sub-canopy, shrubs, low-canopy, moss/ground-cover) - Has at least one 20% within the Forested polygon)</p> <p>4 structures or more: points = 4 3 structures: points = 2 2 structures: points = 1 1 structure: points = 0</p>	1
H 1.2. Hydroperiods	<p>Check the types of water regimes (hydroperiods) present within the wetland. The water regimes to cover more than 20% of the wetland or 5% to count (see next for descriptions of hydroperiods).</p> <p><input type="checkbox"/> Permanently flooded or mudflat <input type="checkbox"/> Seasonally flooded or mudflat <input checked="" type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Scattered only <input checked="" type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input checked="" type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake fringe wetland <input type="checkbox"/> Freshwater tidal wetland</p> <p>4 or more types present: points = 3 3 types present: points = 2 2 types present: points = 1 1 type present: points = 0</p> <p>2 points 2 points</p>	1
H 1.3. Richness of plant species	<p>Count the number of plant species in the wetland that cover at least 10 m². Different patches of the same species can be combined to meet the size threshold but you do not have to name the species. Do not include <i>Larrea tridentata</i>, <i>reed monogroves</i>, <i>purple loosestrife</i>, <i>Canadian thistle</i>. If you counted: > 15 species</p> <p>5-15 species: points = 1 < 5 species: points = 0</p>	1
H 1.4. Interpenetration of habitats	<p>Circle from the diagrams below whether interpenetration among Cowardin plant classes (described in H 1.1.) or the classes and ungraded areas (can include open water or mudflat) 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</p> 	1
All three diagrams in this row are HGM = 3 points		

Wetland name or number A

H 1.5. Special habitat features:	<p>Open the habitat features that are present in the wetland. The number of checks is the number of points.</p> <p><input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) <input checked="" type="checkbox"/> Standing snags (d.b.h. > 4 in) within the wetland <input checked="" type="checkbox"/> Undercut banks are present for at least 5.5 ft (2 m) and/or overhanging plants within at least 3.3 ft (1 m) over a stream for stability or in conjunction with the wetland for at least 10 ft (3 m) <input type="checkbox"/> Shore keep banks of fine material that might be used by beaver or muskrat for denning (1-30 degree slope) OR signs of recent beaver activity are present (cut stumps or trees that have not yet weathered while wood is exposed) <input type="checkbox"/> At least 5% of non-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated. Structures for egg laying by amphibians? <input checked="" type="checkbox"/> Invasive plant cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)</p> <p>4</p>	8
Rating of Site Potential (if score is: <u>15-28</u> = H <u>X</u> <u>3-24</u> = M <u>0-6</u> = L	Add the points in the boxes above	Record the rating on the first page
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	<p>H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit) Calculate: % undisturbed habitat <u>1</u> + 1/3 moderate and low intensity land use <u>10</u> = <u>4</u> % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon: points = 3 20-35% of 1 km Polygon: points = 2 10-15% 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. Calculate: % undisturbed habitat <u>10</u> + 1/3 moderate and low intensity land use <u>23</u> = <u>33</u> % Undisturbed habitat 30-50% and in 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 2 km Polygon: if > 50% of 1 km Polygon is high intensity land use: points = 1-2 > 50% of 1 km Polygon is high intensity: points = 0</p> <p>Total for H 2: Add the points in the boxes above</p>	Record the rating on the first page
H 3.0. Is the habitat provided by the site valuable to society?	<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 being rated. Site meets ANY of the following criteria: points = 2 - It has 1 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 lists) - It is proposed as a location for an individual NSR or 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 conservation plan, in a Shoreline Master Plan, or in a watershed plan. Site has 1 or 2 priority habitats (based on next page) within 100 m</p> <p>points = 2 points = 1 points = 0</p> <p>See does not meet any of the criteria above.</p> <p>Rating of Value: if score is: <u>X</u> <u>2</u> = H <u>1</u> = M <u>0</u> = L</p> <p>Record the rating on the first page</p>	2

Wetland name or number A

WDFW Priority Habitats

Priority Habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, i.e., Washington Department of Fish and Wildlife 2008, Priority Habitat and Species List, Olympia, Washington, 127 pp. <http://wdfw.wa.gov/education/0301055/wahabit015.html> or scores the list from here: <http://wdfw.wa.gov/education/0301055/wahabit015.html>)

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit. **NOTE:** This question is independent of the land use between the wetland unit and the priority habitat.

- **Aspen Stand:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (full descriptions in WDFW PHS report).
- **Herbaceous Bald:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **Old-growth/Mature Forest:** Old-growth wet old-growth forest. Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings with at least 8 trees/acre (20 trees/ha) > 2.16 in (0.1 cm) dbh or > 200 years of age. **Slackwater Forest:** Slacks with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; density, diameter, numbers of snags, and quantity of large downed material is generally less than that found in old-growth 80-200 years 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 descriptions in WDFW PHS report p. 158 - see web link above).
- **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Wetland Prairies:** Herbaceous, non-forested plant communities that can tolerate the form of a dry prairie or a wet prairie (full descriptions in WDFW PHS report p. 161 - see web link above).
- **Manufacture:** The combination of physical, biological, and chemical processes and conditions that interact to provide manufacturing history requirements for instream fish and wildlife resources.
- **Neotreme:** Relatively undisturbed neotreme habitats. These include Coastal Neotreme, Open Forest Neotreme, and Puget Sound Neotreme. (Full descriptions of habitats and the definition of previously undisturbed are in WDFW reports - see web link for previous page).
- **Cave:** 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.
- **Culm:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Tallie:** Homogeneous zone 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 debris and mine tailings. May be associated with other.
- **Snags and Logs:** Snags are considered snags if they are dead or dying and exhibit sufficient decay characteristics to be a snag. **Log:** A log is a log if it is a log of a tree that has a diameter at least height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in length. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

Wetland name or number A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Check off <i>any</i> criteria that apply to the wetland. Circle the category when the appropriate criteria are met.	Category
SC 1.0: Estuarine wetland	Does the wetland meet the following criteria for Estuarine wetland? — The dominant water regime is tidal. — Vegetated, and — With a salinity greater than 0.5 ppt.	Yes - Go to SC 1.1 No - Not an estuarine wetland
SC 1.1: Is the wetland within a National Wildlife Refuge, National Park, National Energy Resource, Federal Area Preserve, State Park or Educational, Environmental, or Scientific Reserve (designated under WAC 332.300-1512)	Yes - Category I No - Go to SC 1.2	Cat. I
SC 1.2: Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, dredging, filling, submerison, grazing, and has less than 10% cover of non-native plant species. If non-native species are Scombre, see page 23) — At least 1/4 of the birdward edge of the wetland has a 100 ft buffer of shrub, forest, or on-ground or unimproved riparian — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands	Yes - Category I No - Category II	Cat. II
SC 2.0: Wetlands of High Conservation Value (WHCV)	SC 2.1: Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? Yes - Go to SC 2.2 No - Go to SC 2.3	Cat. I
SC 2.2: Is the wetland listed on the WHCV database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV	Yes - Category I No = Not a WHCV	Cat. I
SC 2.3: Is the wetland in a Sensitive/Transition/Range that contains a Natural Heritage Value? (http://www.dnr.wa.gov/education/0301055/wahabit015.html)	Yes - Contact WHCV/WHCV and go to SC 2.4 No - Not a WHCV	Cat. I
SC 2.4: Has WHCV identified the wetland within the S/TR as a Wetland of High Conservation Value and listed it on their website? Yes = Category I No = Not a WHCV	Yes - Category I No = Not a WHCV	Cat. I
SC 3.0: Bog	Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bog? Use the key below. If you answer YES you will still need to note the wetland based on its functions.	Cat. I
SC 3.1: Does an area within the wetland unit have organic soil horizons, either peats or mucks, that are more than 10% of the dry soil surface?	Yes - Go to SC 3.2 No - Go to SC 3.3	Cat. I
SC 3.2: Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 10% of the dry soil surface, or an impermeable hardpan such as clay or volcanic ash, or that one hosting a peat or muck, or an impermeable hardpan such as clay or volcanic ash, or that one hosting a peat or muck?	Yes - Go to SC 3.3 No - Is not a bog	Cat. I
SC 3.3: Does an area with peats or mucks have more than 70% cover of mosses at ground level. All? Otherwise, cover of plant species listed in Table 4?	Yes - Is a Category I bog No - Go to SC 3.4	Cat. I
NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute the last criterion by measuring the pH of the water that seeps into a hole dug at least 10 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.		
SC 3.4: Is an area with peats or mucks forested (> 30% cover) with Sika spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine. AND any of the species (per combination of species) listed in Table 4 provide more than 50% of the cover under the canopy?	Yes - Is a Category I bog No - Is not a bog	Cat. I

Wetland name or number A

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least 1,000,000,000 of forest that meets one of these criteria for the WA Department of fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> Old-growth forests (west of Cascade crest); Stands of at least two tree species, forming a multi-layered canopy with occasional small openings, with at least 8 trees/acre (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 21 in (51 cm) or more. Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (51 cm). <p>Yes = Category I NO = Not a forested wetland for this section</p>	<p>CEL I</p>
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbars, gravel banks, shingle, or less frequently, rocks The lagoon in which the wetland is located contains ponded water that is saline or brackish (≥ 0.5 ppt) during most of the year in at least a portion of the lagoon (needs to be measured at the wetland) Yes - Go to SC 5.1 NO = Not a wetland in a coastal lagoon <p>SC 5.1: Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 20% cover of agriculture, opportunistic plant species (see list of species in p. 100). At least 5% of the inward edge of the wetland has a 100 ft buffer of shrubs, forbs, or ungrazed or un-mowed grassland. The wetland is larger than 1/2 acre (1950 m²) <p>Yes = Category I No = Category II</p>	<p>CEL I CEL II</p>
<p>SC 6.0. Interland Wetlands</p> <p>Is the wetland west of the 3883 line (also called the Western Boundary of Upland Community or WBUC)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>or practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> Long Beach Peninsula Lands west of SR 103 Seyland-Weyport Lands west of SR 105 Ocean Shore-Cowichan Lands west of SR 115 and SR 109 <p>Yes - Go to SC 6.1 NO = not an interland wetland for rating</p> <p>SC 6.1: Is the wetland 1 acre or larger and scores an 8 or 9 for the habitat functions on the form (uses H1/H or H4/H, for the three subsets of functions)? Yes = Category I No - Go to SC 6.2</p> <p>SC 6.2: Is the wetland 1 acre or larger, or is it in a mosaic of wetlands that is 1 acre or larger? Yes = Category II No - Go to SC 6.3</p> <p>SC 6.3: Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? Yes = Category III No = Category IV</p>	<p>CEL I CEL II CEL III CEL IV</p>

Wetland name or number A

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Map measurements used to determine answers for H2.0.	
1km strip	36,203,297 SF
Moderate & low intensity land use (LU)	16,786,005 SF
Accessible moderate & low intensity LU	0 SF
Relatively undisturbed LU	3,710,840 SF
Accessible relatively undisturbed LU	1,475,981 SF
High intensity LU	15,706,452 SF
	44%

Wetland name or number B

RATING SUMMARY – Western Washington

Name of wetland (or ID #: Terrace Ave. Wet B, Date of site visit: 9.20.19
 Rated by L. Fenechiser, Trained by Ecology? Yes, No Date of training: 9.30.19
 HGM Class used for rating: Slope Wetland has multiple HGM classes? Yes, No

NOTE: Form is not complete without the figures requested. Figures can be combined.
 Source of base aerial photo/map: FDS Map Portal, Google Earth

OVERALL WETLAND CATEGORY III (based on functions or special characteristics:)

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 - 27

Category II – Total score = 20 - 22

Category III – Total score = 16 - 19

Category IV – Total score = 9 - 15

FUNCTION	Water Quality		Hydrologic		Habitat	
	Improving	Maintaining	Creating	Maintaining	Improving	Maintaining
Site Potential	H	M	L	H	M	L
Landuse Potential	H	M	L	H	M	L
Value	H	M	L	H	M	L
Score Based on Ratings	5	4	4	7	7	16

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I - II
Wetland of High Conservation Value	I
Bog	I
Marsh Forest	I
Old Growth Forest	I
Coastal Lagoon	I - II
Intertidal	I, II, III, IV
None of the above	<input checked="" type="checkbox"/> X

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Wetland name or number B

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Convexion plant classes	O 1.1, H 1.1, H 1.4	Figure 8
Hydroperiods	O 1.4, H 1.1	
Periodic depression	O 1.1, O 4.3	
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, O 5.3	
Map of the contributing basin	D 4.3, O 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 305(d) listed waters in basin (from Ecology website)	O 3.1, O 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Convexion plant classes	H 1.1, H 1.4	Figure 8
Hydroperiods	H 1.2	
Periodic depression	R 1.3	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Width of unit vs. width of stream (can be added to another figure)	R 1.2, R 4.2	
Map of the contributing basin	R 4.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	R 2.2, R 2.3, R 2.4	
Screen capture of map of 305(d) listed waters in basin (from Ecology website)	H 2.1, H 2.2, H 2.3	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Convexion plant classes	L 1.1, L 4.1, H 1.1, H 1.4	Figure 8
Plant cover of trees, shrubs, and herbaceous plants	L 3.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 305(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Convexion plant classes	H 1.1, H 1.4	Figure 8
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (can be added to figure above)	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 3.1, S 3.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 305(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

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Wetland name or number B

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)

YES - Freshwater Tidal Fringe
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.

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 your 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?

NO - 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 30% 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?

NO - 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 seeps. It may flow suburface, as sheetflow, or in a swale without distinct banks.
X The water leaves the wetland without being impounded.

YES - The wetland class is **Slope**

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

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

NO - The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.
NO - The overbank flooding occurs at least once every 2 years.

Wetland name or number B

NO - go to 6

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 REGIMENS 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 B

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) 1% slope (use a 1 ft vertical rise in elevation) for every 100 ft of horizontal distance) Slope is 1% or less Slope is > 1% - 2% Slope is > 2% - 5% Slope is greater than 5%.	points = 3 points = 2 points = 1 points = 0
5.1.2. The soil is below the surface (at least) in some clay or fine organic face MUCK definition? Yes = 2 No = 0	0
5.1.3. Characteristics of the plants in the wetland that trap sediments 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 most means not grazed 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, plants > 1/4 of area Dense, uncut, herbaceous plants > 1/4 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	2
Rating of Site Potential If score is: <u>2</u> = H <u>5-11</u> = M <u>X</u> 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 > 20% 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? Other sources: _____	Yes = 1 No = 0
Total for 5.2	0
Rating of Landscape Potential If score is: <u>1-2</u> = M <u>X</u> 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 encourage directly (i.e., within 1 mi) to a stream, river, lake, or marine water body 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 organic resource in the basin 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 TWQI for the basin in which site is found.	Yes = 2 No = 0
Total for 5.3	2
Rating of Value If score is: <u>X</u> 2-4 = H <u>1</u> = M <u>0</u> = L	Record the rating on the first page

Wetland name or number B

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 > 50% of the area of the wetland All other conditions	points = 1 points = 0
Rating of Site Potential If score is: <u>1</u> = M <u>X</u> 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 (slope of wetland in land uses) or cover that generate excess surface runoff?	Yes = 1 No = 0
Rating of Landscape Potential If score is: <u>1</u> = M <u>X</u> 0 = L	Record the rating on the first page
5.6.0. Are the hydrologic functions provided by the site valuable to society?	
5.6.1. Distance to the nearest river downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon runs) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream	points = 2 points = 1 points = 0
5.6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0
Total for 5.6	1
Rating of Value If score is: <u>2-4</u> = H <u>X</u> 1 = M <u>0</u> = L	Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

Wetland name or number B

These questions apply to wetlands of all HGM classes.

Habitat Functions - Indicate that site functions to provide important habitat	
<p>H 1.0. Does the site have the potential to provide important habitat?</p> <p>H 1.1. Structure of plant community: Indenture one Cowardin classes and draw within the Forested class. Check the Cowardin plant classes in the wetland. UP to 10 patches may be combined for each class to meet the threshold of 8% or more than 20% of the unit. If it is smaller than 2.5 ha, Add the number of structures checked.</p> <p>— Aquatic bed — Emergent — Shrub/Herb (Areas where shrubs have > 30% cover) — Forested (Areas where trees have > 30% cover) — The forested class has a sub of 5 strata (canopy, sub-canopy, shrubby herbaceous, moss/ground cover) — One each cover 20% within the forested polygon</p> <p>H 1.2. Hydroperiod: Check the type 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 (see text for descriptions of hydroperiods):</p> <p>— Permanently flooded or inundated 4 or more types present: points = 3 — Seasonally flooded or inundated 3 types present: points = 2 — Occasionally flooded or inundated 2 types present: points = 1 — Intermittent only 1 type present: points = 0 — Permanently flowing stream or river by or adjacent to the wetland — Seasonally flowing stream, or adjacent to, the wetland — Lake fringe wetland — Freshwater tidal wetland</p> <p>H 1.3. 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 even if you do not know the species. Do not include <i>Eriophorum majus</i>, weed monocultures, purple loosestrife, Canadian thistle. If you counted: > 19 species points = 2 5 - 19 species points = 1 < 5 species points = 0</p> <p>H 1.4. Interposition of habitats: Decide from the diagrams below whether interposition among Cowardin plants classes (described in H 1.1) or the classes and ungrouped areas (can include open water or mudflats) is high, moderate, low, or none. If you draw 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</p> <p>All these diagrams in this row are HIGH = 3 points</p>	<p>4 structures or more: points = 4 3 HGM types: points = 2 2 structures: points = 1 1 structure: points = 0</p> <p>2 points 2 points 1 2 points</p> <p>points = 2 points = 1 points = 0</p> <p>1</p>

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Wetland name or number B

<p>H 1.5. Special Invertebrates: Check the habitat features that are present in the wetland. The number of checks is the number of points.</p> <p>— Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) — Standing snags (6 to 8 in) within the wetland — Undercut banks are present for at least 6.5 ft (2 m) length overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) or, 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 denning (> 30 degree angle) OR signs of recent beaver activity are present (w/ adults or trees that have not yet established where wood is exposed) — At least 3 ac of shrub-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated. Structures for egg-laying by amphipods) — Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 2.1 for list of invasives)</p> <p>Total for H 1: Add the points in the boxes above</p>	<p>points = 3 points = 2 points = 1 points = 0</p> <p>4</p> <p>8</p>
<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site? Calculate: % undisturbed habitat: $4 = \frac{10}{25} \times 100 = 40\%$ If total accessible habitat is: > 71,183.5% of 1 km Polygon 20-33% of 1 km Polygon 10-15% of 1 km Polygon < 10% of 1 km Polygon</p> <p>H 2.1. Aquatic habitat (includes any habitat that directly uses wetland area). Calculate: % undisturbed habitat: $4 = \frac{10}{25} \times 100 = 40\%$ If total accessible habitat is: > 71,183.5% of 1 km Polygon 20-33% of 1 km Polygon 10-15% of 1 km Polygon < 10% of 1 km Polygon</p> <p>H 2.2. Undisturbed habitat in 3 km Polygon around the wetland. Calculate: % undisturbed habitat: $22 = \frac{10}{45} \times 100 = 22\%$ Undisturbed habitat > 50% of Polygon Undisturbed habitat 10-50% and in 1-3 patches Undisturbed habitat < 10% of 3 km Polygon</p> <p>H 2.3. Land use intensity in 1 km Polygon: if > 50% of 1 km Polygon is high intensity land use & 50% of 1 km Polygon is high intensity</p> <p>Total for H 2: Add the points in the boxes above</p>	<p>points = 3 points = 2 points = 1 points = 0</p> <p>22 34</p> <p>points = 3 points = 2 points = 1 points = 0</p> <p>1</p> <p>0</p> <p>1</p>
<p>H 3.0. Is the habitat provided by the area valuable to society? How applicable to the wetland being rated: Site meets ALL of the following criteria: — 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 lists) — It is mapped as a location for an individual WDR by 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, in a Shoreline Master Plan, or in a wetland plan Site has 1 or 2 priority habitats (listed on next page) within 100 m</p> <p>Rating of Value: If score is: $2 = H$ $1 = M$ $0 = L$</p>	<p>points = 2</p> <p>2</p>

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Wetland name or number B

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's Forests Inventory? *If your answer YES you will still need to enter the wetland based on its functions.*

- Old-growth forests (west of Cascade crest), stands of at least two tree species, forming a multi-layered canopy with occasional small openings, with at least 8 trees/ac (20 trees that are at least 200 years of age OR have a diameter at breast height (d.b.h.) of 37 to 81 cm) or more.
- Mature forests (west of the Cascade crest), stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (d.b.h.) exceeding 21 in (53 cm).

Yes = Category I

No = Not a forested wetland for this script

CH 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 sandbars, gravel banks, shingle, or, less frequently, rocks
- The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.3 ppt) during most of the year in at least a portion of the lagoon (fresh water adjacent to the wetland is not counted)
- The wetland is relatively undisturbed (has no filling, ditching, filling, cultivation, grazing, and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).
- At least 5% of the landward edge of the wetland has a 200 ft buffer of shrub, forest, or ungrazed or unmowed grassland.
- The wetland is larger than 1/10 ac (4350 ft²)

Yes = Category I

No = Category II

CH II

SC 6.0. Interfluvial Wetlands

Is the wetland west of the 148th line (also called the Western boundary of Upland Ownership or WBUO)? *If you answer yes you will still need to note the wetland based on its habitat functions.*

In practical terms that means the following geographic areas:

- Long Beach Peninsula, lands west of SR 103
- Grayland-Westport, Lands west of SR 105
- Green Shores-Copple, lands west of SR 115 and SR 119

Yes = GO to SC 6.1

CH I

SC 6.1. Is the wetland 1 ac or larger and rated an B or 9 for the habitat functions of the form (rates H, H1 or H, H, M for the three aspects of function)?

Yes = Category I

No = GO to SC 6.2

CH B

SC 6.2. Is the wetland 1 ac or larger, or is it a mosaic of wetlands that is 1 ac or larger?

Yes = Category II

No = GO to SC 6.3

CH III

SC 6.3. Is the unit between 0.1 and 1 ac, or is it a mosaic of wetlands that is between 0.1 and 1 ac?

Yes = Category III

No = Category IV

CH IV

Category of wetland based on Special Characteristics
If you answered No for all types, enter "N/A" Application on Summary Form.

Wetland name or number B

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Map measurements used to determine answers for H2.0

1km area

Moderate & low intensity land use (LU)

Accessible moderate & low intensity LU

Relatively undisturbed LU

Accessible relatively undisturbed LU

High intensity LU

37,355,020 SF

16,244,032 SF

0 SF

4,617,043 SF

1,507,722 SF

16,493,945 SF

44%

44%

44%

12%

40%

44%

Wetland name or number C

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Terrace Ave. Wet C Date of site visit: 9.20.19
 Rated by: L. Enseliser Trained by Ecology? X Yes No Date of training: 9.20.19
 HGM class used for rating: Depressional Wetland has multiple HGM classes? Y X N

NOTE: Form is not complete without the figures requested (figures can be completed).
 Source of base aerial photography: FOS Map Portlet, 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	Circle the appropriate ratings			TOTAL
	Inspiring Water Quality	Hydrologic	Habitat	
Site Potential	H (M)	L	H (M)	H (M)
Landscape Potential	H (M)	L	H (M)	H (M)
Value	H (M)	M	L	H (M)
Score Based on Ratings	7	6	5	18

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

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

Wetland name or number C

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Common plant classes	D1.3, H1.1, H1.4	2
Hydroperiods	D1.4, H1.2	2
Location of outlet (can be added to map of hydroperiods)	D1.1, D4.1	2
Boundary of area within 150 ft of the wetland (can be added to another figure)	D2.2, D5.2	2
Map of the contributing basin	D4.3, D5.3	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	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D3.1, D3.2	2
Screen capture of list of TMDLs for WRIA in which wetland is found (from web)	D3.3	2

Riverine Wetlands

Map of:	To answer questions:	Figure #
Common plant classes	H1.1, H1.4	2
Hydroperiods	H1.2	2
Revised elevations	H1.1	2
Boundary of area within 150 ft of the wetland (can be added to another figure)	H2.4	2
Plant cover of trees, shrubs, and herbaceous plants	H1.2, R4.2	2
Width of cut vs. width of stream (can be added to another figure)	R4.1	2
Map of the contributing basin	R2.2, R2.3, R5.2	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	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R3.1	2
Screen capture of list of TMDLs for WRIA in which wetland is found (from web)	R3.2, R3.3	2

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Common plant classes	L1.1, L4.1, H1.1, H1.4	2
Plant cover of trees, shrubs, and herbaceous plants	L1.2	2
Boundary of area within 150 ft of the wetland (can be added to another figure)	L2.2	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	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L3.1, L3.2	2
Screen capture of list of TMDLs for WRIA in which wetland is found (from web)	L3.3	2

Slope Wetlands

Map of:	To answer questions:	Figure #
Common plant classes	H1.1, H1.4	2
Hydroperiods	H1.2	2
Plant cover of dense trees, shrubs, and herbaceous plants	S1.2	2
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (can be added to figure above)	S4.1	2
Boundary of 150 ft buffer (can be added to another figure)	S2.1, S5.1	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	2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S3.1, S3.2	2
Screen capture of list of TMDLs for WRIA in which wetland is found (from web)	S3.3	2

Wetland name or number C

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 dikes 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)

YES - Freshwater Tidal Fringe

If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetland. 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.

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 Plains

If your wetland can be classified as a Plains 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 30% 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?

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

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

The water leaves the wetland without being impounded.

NO - go to 5

YES - The wetland class is Slope

NOT surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <5 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 C

NO - go to 6

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

YES - The wetland class is Riverine

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 from 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 C

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water conditions from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key), whose outlet is a permanently flowing outlet. Wetland has an intermittently flowing stream or ditch. OR highly constricted permanently flowing outlet. Wetland has an unconfined, or slightly constricted, surface outlet that is permanently flowing. Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. Wetland has a flat depression (QUESTION 7 on key) with no surface water leaving it (see outlet). Wetland has an unconfined, or slightly constricted, surface outlet that is permanently flowing.	points = 3 points = 3 points = 2 points = 1 points = 1
D 1.2. Does soil 2 in below the surface (or shall) yield to true clay or true organic (see notes optional) (see 4, No = 0)	0
D 1.3. Characteristics and distribution of dominant plants (Emergent, Semi-Substr., and/or Forstedt Comarid class): Wetland has persistent, ungrazed, plants > 95% of area Wetland has persistent, ungrazed, plants < 5% of area Wetland has persistent, ungrazed plants > 1/10 of area Wetland has persistent, ungrazed plants < 1/10 of area	points = 5 points = 3 points = 1 points = 0
D 1.4. Characteristics of adjacent upland or transitional: This is the area that is ponded for at least 2 months. See description in overview. Area seasonally ponded for > 75 total area of wetland Area seasonally ponded for < 75 total area of wetland Area seasonally ponded for < 75 total area of wetland	points = 4 points = 2 points = 0
Total for D 1	6

Rating of Site Potential If score is: 3 - 3-6 = H X 6-11 = M 0-5 = L Record the rating on the first page

D 2.0. Does the landscape have the potential to support the water quality function of the site?

D 2.1. Does the wetland unit receive stormwater discharge?	Yes = 1 No = 0
D 2.2. Is > 10% of the area within 150 ft. of the wetland in land uses that generate pollutants?	Yes = 1 No = 0
D 2.3. Are there septic systems within 250 ft. of the wetland?	Yes = 1 No = 0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?	Yes = 1 No = 0
Total for D 2	1

Rating of Landscape Potential If score is: 3 or 4 = H X 1 or 2 = M 0 = L Record the rating on the first page

D 3.0. Is the water quality improvement provided by the site valuable to society?

D 3.1. Does the wetland disperse 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
D 3.2. Is the wetland in a basin in sub-basin where an aquatic resource is on the 303(d) list?	Yes = 1 No = 0
D 3.3. Was the site been identified in a watershed or local plan as important for maintaining water quality (consider TDS if there is or TMDL for the basin in which the unit is found)?	Yes = 2 No = 0
Total for D 3	2

Rating of Value If score is: X 2-4 = H 1 = M 0 = L Record the rating on the first page

Wetland name or number C

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water conditions from the wetland: Wetland is a depression or flat depression with no surface water leaving it (see outlet). Wetland has an intermittently flowing stream or ditch. OR highly constricted permanently flowing outlet. Wetland has a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. Wetland has an unconfined, or slightly constricted, surface outlet that is permanently flowing. Wetland is a flat depression (QUESTION 7 on key) with no surface water leaving it (see outlet). Wetland has an unconfined, or slightly constricted, surface outlet that is permanently flowing.	points = 4 points = 2 points = 1 points = 1 points = 0
D 4.2. Depth of storage during hydrologic: Estimate the height of ponding above the bottom of the outlet, for wetlands with no outlet, measure from the surface of permanent water, or if dry, the deepest part: Metric of ponding are 3 ft. or more above the surface or bottom of outlet. Metric of ponding between 2 ft. to < 3 ft. from surface or bottom of outlet. Metric of ponding less than 2 ft. from surface or bottom of outlet. The wetland is a "threshold" wetland. Wetland is flat but has small depressions on the surface that trap water. Metric of ponding less than 0.5 ft. (15 cm).	points = 7 points = 5 points = 3 points = 2 points = 1 points = 0
D 4.3. Contribution of the wetland 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 watershed unit itself. The area of the basin is less than 20 times the area of the unit. The area of the basin is 20 to 100 times the area of the unit. The area of the basin is more than 100 times the area of the unit. Entire wetland is in the flat area.	points = 5 points = 3 points = 0
Total for D 4	7

Rating of Site Potential If score is: 3-4 = H X 5-11 = M 0-5 = L Record the rating on the first page

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharge?	Yes = 1 No = 0
D 5.2. Is > 10% of the area within 150 ft. of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0
D 5.3. Is more than 25% of the contributing basin of the wetland covered with invasive human land uses (residential at > 1 residential/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0
Total for D 5	2

Rating of Landscape Potential If score is: 3 = H X 1 or 2 = M 0 = L Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The unit is in a sub-basin that has flooding problems. Choose the description that best describes conditions around the wetland unit being rated. Do not add points. (Place the checkmark next to other than one description.) The wetland captures surface water that would otherwise flow down gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon reefs). Flooding occurs in a sub-basin that is immediately down gradient of unit. Surface flooding problems are in a sub-basin farther down gradient. Flooding from groundwater is an issue in the sub-basin. The existing or potential outflow from the wetland is so constricted by human or natural conditions that the water stored by the wetland cannot reach areas at risk. Explain why _____ There are no problems with flooding downstream of the wetland.	points = 2 points = 1 points = 1 points = 1 points = 0
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood training plan?	Yes = 2 No = 0
Total for D 6	1

Rating of Value If score is: X 3-4 = H X 1 = M 0 = L Record the rating on the first page

Wetland name or number C

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

<p>H 1.0. Does the site have the potential to provide habitat?</p> <p>H 1.1. Structure of plant community indicators are Cowardin classes and stems within the forested zone. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of 8% or more than 10% of the wetland if it is smaller than 2.5 ac. Add the number of structures checked.</p> <p><input checked="" type="checkbox"/> Emergent bed <input checked="" type="checkbox"/> Shrub-shrub (area where shrubs have > 30% cover) <input type="checkbox"/> Forested forest where trees have > 30% cover <input type="checkbox"/> If the wetland has a forested class, check if: - The forested class has 3 out of 5 strata (arbores, sub-canopy, shrubs, herbaceous, moss/ground cover) - that each tree > 20% within the forested polygon.</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>	1
<p>H 1.2. Hydroperiods</p> <p>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 leaf descriptions of hydroperiods:</p> <p><input type="checkbox"/> Permanently flooded or inundated <input type="checkbox"/> Seasonally flooded or inundated <input checked="" type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Saturated only <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Late fringe wetland <input type="checkbox"/> Freshwater tidal wetland</p>	<p>4 or more types present: points = 4 3 types present: points = 3 2 types present: points = 2 1 type present: points = 1 0 types present: points = 0</p>	0
<p>H 1.3. Richness or plant species</p> <p>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>Elymus</i> spp., <i>reed</i>, <i>amaryllis</i>, <i>purple loosestrife</i>, <i>Canadian thistle</i>. If you counted > 18 species:</p> <p>5 - 18 species: points = 1 < 5 species: points = 0</p>	1	1
<p>H 1.4. Interruption of habitat</p> <p>Decide from the diagrams below whether interruption among Cowardin plants classes (illustrated in H 1.1), or the classes and ungrazed areas (can include open water or mudflats) 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</p>	<p>High = 3 points Moderate = 2 points Low = 1 point None = 0 points</p>	1

Wetland name or number C

<p>H 1.5. Special habitat features</p> <p>Check the habitat features that are present in the wetland. The number of checks is the number of points.</p> <p><input checked="" type="checkbox"/> Large, downed woody debris within the wetland (> 4 in diameter and 6 ft length). Standing snags (dbs > 4 in) within the wetland.</p> <p><input type="checkbox"/> Invertebrate banks are present for at least 6.5 ft (2 m) and/or overhanging debris extends at least 3.3 ft (1 m) over a stream (or ditch) by or contiguous with the wetland. (total least 33 ft (10 m))</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for damming. (> 30 degree slope) 0% signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed).</p> <p><input type="checkbox"/> At least 5% of the stemmed post-fire plants or woody branches are present in areas that are permanently or seasonally inundated (structures for 95% slope by amphibians)</p> <p><input type="checkbox"/> Invasive plant cover less than 25% of the wetland area in every stratum of plants (see H 1.2 for list of invasive)</p>	<p>points = 3 points = 2 points = 1 points = 0</p>	1
<p>Total for H 1</p> <p>Add the points in the boxes above</p>	4	
<p>Rating of Site Potential: If score is: <u>15-18</u> = H <u>3-4</u> = M <u>X-0-6</u> = L</p>		
<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p> <p>H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit)</p> <p>Calculate: % undisturbed habitat $\frac{Q}{A} \times 100$ moderate and low intensity land uses / $\frac{D}{A} \times 100$ % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon: points = 3 20-33% of 1 km Polygon: points = 2 10-19% of 1 km Polygon: points = 1 < 10% of 1 km Polygon: points = 0</p>	<p>points = 3 points = 2 points = 1 points = 0</p>	0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland</p> <p>Calculate: % undisturbed habitat $\frac{H}{A} \times 100$ moderate and low intensity land uses / $\frac{25}{A} \times 100$ % Undisturbed habitat > 50% of Polygon: points = 3 Undisturbed habitat 10-50% and in 1-3 patches: points = 2 Undisturbed habitat 10-50% and > 3 patches: points = 1 Undisturbed habitat < 10% of 1 km Polygon: points = 0 Undisturbed habitat in 1 km Polygon: % > 50% of 1 km Polygon: high intensity land use: points = 1-3 > 50% or 3 km Polygon: high intensity: points = 0</p>	<p>points = 3 points = 2 points = 1 points = 0</p>	0
<p>Total for H 2</p> <p>Add the points in the boxes above</p>	1	
<p>Rating of Landscape Potential: If score is: <u>4-5</u> = H <u>X-3</u> = M <u>< 1-1</u> = L</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 rating method.</p> <p>Site meets any of the following criteria:</p> <ul style="list-style-type: none"> It has 3 or more priority habitats within 100 m (see next page) It provides habitat for threatened or endangered species (any point or animal on the state or federal lists) It is managed as a recreation 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 designated as an important habitat site in a local or regional comprehensive plan, in a shoreline master plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m <p>Site does not meet any of the criteria above</p>	<p>points = 2 points = 1 points = 0</p>	1
<p>Rating of Value: If score is: <u>2</u> = H <u>X-1</u> = M <u>0</u> = L</p> <p>Record the rating on the first page</p>		

Wetland name or number C

SC 6.0. Forested Wetlands

Does the wetland have at least 1 dominant species of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forest or priority habitat? If your answer YES you will still need to rate the wetland based on its function.

- Old-growth forests (west of Cascade crest). Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more
- Abundant forests (west of the Cascade Crest). Stands where the largest trees are 80-100 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 6.75 in (17.3 cm).

Yes = Category I
 No = Not a forested wetland for this section

Cat. 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 has a depression subject to marine waters that is wholly or partially separated from marine waters by sandbars, gravel banks, siltbars, or less frequently, rocks.
- The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 parts per thousand) during most of the year in at least a portion of the lagoon (except for beach-scoured wetlands).

Yes = 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 (no mowing, ditching, filling, cultivation, grazing, and has less than 20% cover of aggressive, opportunistic plant species, less than 50% species on a 100' x 100' plot).
- At least 5% of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or unmowed grassland.
- The wetland is larger than 1/2 acre (2026 ft²).

Yes = Category I
 No = Category II

Cat. I

SC 6.0. Interstitial Wetlands

Is the wetland west of the 1888 line (also called the Western boundary of Upland Community or WUBC)? If you answer yes you will still need to rate the wetland based on its habitat function.

In practical terms that means the following geographic areas:

- Long Beach Peninsula: areas west of SR 203
- Grainland/Wedport: lands west of SR 105
- Oregon Shoreline County: lands west of SR 115 and SR 209

Yes = SC 6.1
 No = not an interstitial wetland for rating

SC 6.1. Is the wetland 1 ac or larger and scores on 8 or 9 for the habitat functions on the form (uses I, H, H or H, H, H for the three aspects of function)?
 Yes = Category I
 No = SC 6.2

SC 6.2. Is the wetland 1 ac or larger, or is it a mosaic of wetlands that is 1 ac or larger?
 Yes = Category II
 No = SC 6.3

SC 6.3. Is the wetland between 0.1 and 1 ac, or is it a mosaic of wetlands that is between 0.1 and 1 ac?
 Yes = Category III
 No = Category IV

Cat. I

Category of wetland based on Special Characteristics. If you answered No for all types, enter "not Applicable" on Summary Form.

Wetland name or number C

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Map measurements used to determine answers for H2.0.

1 km area - 34,361,283 SF

Moderate & low intensity land use (LU) - 16,929,039 SF 50%

Accessible moderate & low intensity LU - 0 SF

Relatively undisturbed LU - 1,505,299 SF 4%

Accessible relatively undisturbed LU - 1,505,299 SF 4%

High Intensity Land Use - 15,926,945 SF 46%

Wetland name or number D

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Reynowet - Wet D Date of site visit: 4/15/20
 Rated by: L. Emehiser Trained by Ecology? X Yes No Date of training: 9/30/14
 HGM class used for rating: Depressional 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: RDS Map Portal, Google Earth

OVERALL WETLAND CATEGORY II (based on functions X or special characteristics)

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Impeding Water Quality	Hydrologic	Habitat
Site Potential	H M L	H M L	H M L
Landscape Potential	H M L	H M L	H M L
Value	H M L	H M L	H M L
Score Based on Ratings	<u>B</u>	<u>C</u>	<u>F</u>
TOTAL			<u>21</u>

2. Category based on SPECIAL CHARACTERISTICS of wetland

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

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

Wetland name or number D

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Concave plant classes	D1.3, H1.1, H1.4	1
Hydroperiods	01.4, M1.2	1
Location of outlier (can be added to map of Hydroperiods)	01.1, D4.1	1
Boundary of area within 150 ft of the wetland (can be added to another figure)	02.2, D5.2	1
Map of the contributing basin	04.3, D5.8	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	3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	03.1, 03.2	4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D3.3	5

Riverine Wetlands

Map of:	To answer questions:	Figure #
Concave plant classes	H1.1, H1.4	1
Hydroperiods	H1.2	1
Ponded depressions	R1.1	1
Boundary of area within 150 ft of the wetland (can be added to another figure)	R2.4, R4.2	1
Plant cover of trees, shrubs, and herbaceous plants	R4.1	1
Width of unit vs. width of stream (can be added to another figure)	R2.2, R2.3, R5.2	1
Map of the contributing basin	R2.1, H2.2, H2.3	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	3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R3.1	4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R3.2, R3.3	5

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Concave plant classes	L1.1, L4.1, H1.1, H1.4	1
Plant cover of trees, shrubs, and herbaceous plants	L1.2	1
Boundary of area within 150 ft of the wetland (can be added to another figure)	L1.2	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	3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L3.1, L3.2	4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L3.3	5

Slope Wetlands

Map of:	To answer questions:	Figure #
Concave plant classes	H1.1, H1.4	1
Hydroperiods	H1.2	1
Plant cover of dense, rigid trees, shrubs, and herbaceous plants	S1.3	1
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (can be added to figure above)	S4.1	1
Boundary of 150 ft buffer (can be added to another figure)	S2.1, S5.1	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	3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S3.1, S3.2	4
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S3.3	5

Wetland name or number: D

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 #.

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)

YES - Freshwater Tidal Fringe

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

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 Plate

If your wetland can be classified as a Plate 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 30% 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?

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

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

___ 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 <3 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 Rating System for Western WA, 2014 Update
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Wetland name or number: D

NO - go to 6

YES - The wetland class is Riverine

NOTE: The riverine unit can contain depressions that are filled with water when the river is in 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

B. 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 + Inverne	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 Rating System for Western WA, 2014 Update
Rating Form - Effective January 1, 2015

Wetland name or number D

DEPRESSIONAL AND FLATS WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

D 1.0. Does the site have the potential to improve water quality?	Wetland is a depression or flat depression (QUESTION 7 on Key), with no surface water leaving it (no outlet). Wetland has an intermittently flowing stream or ditch. OR highly constricted permanently flowing outlet. Wetland has an unconstructed, or slightly constricted, surface outlet that is permanently flowing. Wetland is a flat depression (QUESTION 7 on Key), whose outlet is a permanently flowing ditch. Wetland is a flat depression (QUESTION 7 on Key), whose outlet is a permanently flowing ditch.	points = 3 points = 2 points = 1 points = 1
D 1.1. Characteristics and distribution of persistent plants (Emergent, Scud-grass, and/or Forested Grassland class): Wetland has persistent, ungrazed plants > 95% of area Wetland has persistent, ungrazed plants > 5% of area Wetland has persistent, ungrazed plants > 1/10 of area Wetland has persistent, ungrazed plants < 1/10 of area		points = 5 points = 3 points = 1 points = 0
D 1.4. Characteristics of seasonal flooding, or inundation: This is the area that is ponded for at least 2 months. See description in protocol. Area seasonally ponded is > 8% total area of wetland Area seasonally ponded is > 4% total area of wetland Area seasonally ponded is < 4% total area of wetland		points = 4 points = 2 points = 0
Total for D 1	Add the points in the boxes above	12

Rating of Site Potential If score is: $X \geq 12 = H$ $6-11 = M$ $0-5 = L$ Record the rating on the first page

D 2.0. Does the landscape have the potential to support the water quality function of the site?	Yes = 1 No = 0	0
D 2.1. Does the wetland unit receive stormwater discharge?	Yes = 1 No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there input systems within 250 ft of the wetland?	Yes = 1 No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in question D 2.1, D 2.2, or D 2.3?	Yes = 1 No = 0	0
Total for D 2	Add the points in the boxes above	1

Rating of Landscape Potential If score is: $X \geq 3 = H$ $X \geq 1$ or $2 = M$ $0 = L$ Record the rating on the first page

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 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	1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality forever? (Yes/No where is a 303(d) for the basin in which the wet is found?)	Yes = 2 No = 0	2
Total for D 3	Add the points in the boxes above	4

Rating of Value If score is: $X \geq 4 = H$ $1 = M$ $0 = L$ Record the rating on the first page

Wetland name or number D

DEPRESSIONAL AND FLATS WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation

D 4.0. Does the site have the potential to reduce flooding and stream degradation?	Wetland is a depression or flat depression with no surface water leaving it (no outlet). Wetland has an intermittently flowing stream or ditch. OR highly constricted permanently flowing outlet/points = 2 Wetland is a flat depression (QUESTION 7 on Key), whose outlet is a permanently flowing ditch. Wetland has an unconstructed, or slightly constricted, surface outlet that is permanently flowing. Wetland is a flat depression (QUESTION 7 on Key), whose outlet is a permanently flowing ditch.	points = 4 points = 2 points = 1 points = 0
D 4.1. Depth of standing water and periodic. Estimate the height of flooding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or, if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet. Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet. Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet. The wetland is a "shallow" wetland. Wetland is the flat has small depressions on the surface that trap water. Marks of ponding less than 0.5 ft (15 cm).	points = 7 points = 5 points = 3 points = 3 points = 1 points = 0	
D 4.3. Contribution of the wetland to stream in the watershed. Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland and itself. The area of the basin is less than 10 times the area of the unit. The area of the basin is 10 to 100 times the area of the unit. The area of the basin is more than 100 times the area of the unit. Entire wetland is in the flat class.	points = 5 points = 3 points = 0	
Total for D 4	Add the points in the boxes above	10

Rating of Site Potential If score is: $X \geq 12 = H$ $6-11 = M$ $0-5 = L$ Record the rating on the first page

D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	Yes = 1 No = 0	0
D 5.1. Does the wetland receive stormwater discharge?	Yes = 1 No = 0	0
D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential or > 1 residential, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	1
Total for D 5	Add the points in the boxes above	2

Rating of Landscape Potential If score is: $X \geq 3 = H$ $X \geq 1$ or $2 = M$ $0 = L$ Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The unit is in a location that has floodplain problems. Consider the description that best matches conditions around the wetland unit being rated. Do not add points. Change the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow down gradient into areas where flooding has occurred (human or natural reservoir (e.g., houses or wetland fields)).	points = 2	
• Flooding occurs in a sub-basin that is immediately down gradient.	points = 2	
• Surface flooding problems are in a sub-basin further down gradient.	points = 1	
Flooding from groundwater is an issue in the sub-basin.	points = 1	
The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____	points = 0	
There are no problems with flooding downstream of the wetland.	points = 0	
D 6.2. Has the site been identified as important for flood storage or food convergence in a regional flood control plan?	Yes = 2 No = 0	0
Total for D 6	Add the points in the boxes above	1

Rating of Value If score is: $X \geq 4 = H$ $X \geq 1 = M$ $0 = L$ Record the rating on the first page

Wetland name or number D

These questions apply to wetlands of all HIGH classes:

HABITAT FUNCTIONS – Indicators that site functions to provide important habitat:

H 1.0. Does the site have the potential to provide habitat?

Check the structure of plant community. Indicators are Cowardin classes and strata within the forested class. Check the overall plant density in the wetland. Up to 10 indicators may be considered for each class (remember the threshold of 8 or more than 10% of the wetland or % ac to count (see text for descriptions of hydroperiods).

- Aquatic bed
- Emergent
- Scrub shrub (areas where shrubs have > 30% cover)
- Forested (areas where trees have > 30% cover)
- The forested class has 3 out of 5 strata (conifer, sub-conifer, shrub, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon

H 1.2. Hydroperiod

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or % ac to count (see text for descriptions of hydroperiods).

- Permanently flooded or saturated
- Seasonally flooded or saturated
- Occasionally flooded or saturated
- 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

H 1.3. Richness of plant species

Count the number of plant species in the wetland list. Over 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 *Eurotia mytilifolia*, reed *Comynopsis*, purple loosestrife, Canadian diable if not counted. > 19 species

- 5-19 species points = 2
- < 5 species points = 0

H 1.4. Interpenetration of wetlands

Decide from the diagrams below whether interpenetration among Cowardin plant classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflat) 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)

None = 0 points

Low = 1 point

Moderate = 1 point

All three diagrams in this row are HIGH = 3 points

Wetland name or number D

H 1.5. Special habitat features:

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

- Large downed, woody debris within the wetland (> 4 in diameter and 6 ft long)
- Standing snags (dbh > 4 in) within the wetland
- Unfilled banks are present for at least 6.6 ft (2 m) and/or overhanging plants extend at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland (for at least 33 ft (10 m))
- Stable steep banks of the material that might be used by beaver or muskrat for denning (> 20 degree slope) OR signs of recent beaver activity are present (cut shrubs or trees that have not yet weathered where wood is exposed)
- At least 3 ac of thin downed rotten logs or woody branches are present in areas that are permanently or seasonally inundated. (Indicators for egg-laying by amphibians)
- Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for full ac count)

Total for H 1

Add the points in the boxes above

Rating of Site Potential If score is: $18-30 = H$ $7-14 = M$ $0-6 = L$

H 2.0. Does the landscape have the potential to support the habitat functions of the site?

- H 2.1. Accessible habitat (include only habitat that directly abuts wetland units).
Criterium: % undisturbed habitat $Q \geq 10\%$ moderate and low intensity land use (1/2) 1 1 %
If total accessible habitat is:
 - > 1/2 (25-30%) of 1 km polygon points = 3
 - 20-33% of 1 km polygon points = 2
 - 10-19% of 1 km polygon points = 1
 - < 10% of 1 km polygon points = 0
- H 2.2. Undisturbed habitat at 1 km Polygon around the wetland.
Criterium: % undisturbed habitat $Q \geq 10\%$ moderate and low intensity land use (1/2) 25 36 5 %
 - Undisturbed habitat > 50% of Polygon points = 3
 - Undisturbed habitat 10-50% and in 1-3 patches points = 2
 - Undisturbed habitat 10-50% and 1 patch points = 1
 - Undisturbed habitat < 10% or 2 km Polygon points = 0
- H 2.3. Land use intensity in 1 km Polygon. If
 - > 50% of 1 km Polygon is high intensity land use points = (1-2)
 - < 50% of 1 km Polygon is high intensity points = 0

Total for H 2

Add the points in the boxes above

Rating of Landscape Potential If score is: $4-6 = H$ $3 = M$ $0-1 = L$

H 3.0. Is the habitat provided by the site valuable to society?

- 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 being rated.
Site meets ANY of the following criteria:
 - It has 3 or more priority habitats within 100 m (see next page)
 - It provides habitat for threatened or endangered species (any plants or animals on the state or federal list)
 - It is recognized 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 Shoreline Master Plan, or in a watershed plan
 - Site has 1 or 2 priority habitats (based on next page) within 100 m

Site does not meet any of the criteria above

Record the rating on the first page

There are two Type Ns Streams located west of the subject wetland, within 330'.

Wetland name or number **D**

<p>SC 6.0. Forested Wetlands</p> <p>Does the wetland have at least 1 continuous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's Forests as priority habitats? <i>If your answer YES you will still need to visit the wetland based on its functions.</i></p> <ul style="list-style-type: none"> Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings, with an basal diameter (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (d.b.h) of 32 in (81 cm) or more. Mature forests (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (d.b.h), excluding 21 in (53 cm). <p>Yes = Category I No = Not a forested wetland for this section</p>	<p>Cat. I</p>
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbars, gravel banks, shingle, or less frequently rocks. The lagoon in which the wetland is located contains perennial water that is saline or brackish (> 0.5 ppt) during most of the year or at least a portion of the lagoon (except for <i>Sarcocornia</i> or <i>Suaeda</i>). Yes - Go to SC 5.1 No - Not a wetland in a coastal lagoon <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of agriculture, opportunistic plant species (see list of species on p. 100). At least 3% of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or ungrazed or semi-mowed riparian. The wetland is larger than 1/4 acre (10350 ft²) <p>Yes = Category I No = Category II</p>	<p>Cat. II</p>
<p>SC 6.0. Interstitial Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If your answer yes you will still need to visit the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> Long Beach Wetlands (lands west of SR 303) Gravel-Waterport (lands west of SR 105) Ocean Shore Coastal (lands west of SR 315 and SR 108) <p>Yes - Go to SC 6.1 No - not an interstitial wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the highest functions on the form (rates R,H,H or U,H,M for the three aspects of function)?</p> <p>Yes = Category I No - Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger or is it in a mosaic of wetlands that is 1 ac or larger?</p> <p>Yes = Category II No - Go to SC 6.3</p> <p>SC 6.3. Is the unit between D.1 and 1 ac, or is it a mosaic of wetlands that is between 0.1 and 1 ac?</p> <p>Yes = Category III No = Category IV</p> <p>Category of wetland based on Special Characteristics <i>If you answered No for all types, enter "Not Applicable" on Summary Form</i></p>	<p>Cat. III</p>

Wetland name or number **D**

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Map measurements used to determine answers for H2.0.

1km area - 37,120,415 SF

Moderate & low intensity land use (LU) - 16,824,313 SF 45%

Accessible moderate & low intensity LU - 790,105 SF 2%

Relatively undisturbed LU - 5,178,497 SF 14%

Accessible relatively undisturbed LU - 0 SF

High Intensity Land Use - 15,117,605 SF 41%

RATING ANSWERS FOR WETLAND A

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

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

S2.1 & S5.1 None (0%) 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 scrub-shrub and forested vegetation. The forested class contains 3 out of 5 strata that each cover 20% within the forested polygon; and low interspersions.

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

RATING ANSWERS FOR WETLAND B

S1.3 Dense, woody, 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 6% of the area within 150' of the uphill side of Wetland B is in land use that generates pollutants and excess runoff.

H1.1 & H1.4 The wetland contains scrub-shrub and forested vegetation. The forested class contains 3 out of 5 strata that each cover 20% within the forested polygon; and low interspersions.

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

RATING ANSWERS FOR WETLAND C

D1.1 & D4.1 Wetland is a depression with no surface water leaving it (no outlet).

D1.3 Wetland has persistent ungrazed plants >1/2 of the area.

D1.4 Area that is seasonally ponded is <1/4 total area of the wetland.

D2.2 & D5.2 Greater than 10% of the area within 150' of off-site Wetland C is in land use that generates pollutants and excess runoff (~100%).

D4.3 the contributing basin for Wetland C is ~125,800 square feet in size / the ~1,603 square foot wetland rating unit = 78.47 (basin is 10 to 100 times the area of the unit).

D5.3 Greater than 25% of the contributing basin of Wetland C is covered with intensive land uses (institutional & residential at > 1 unit per acre).

H1.1 & H1.4 The wetland contains emergent and scrub-shrub vegetation; and low interspersions.

H1.2 The wetland contains a saturated only hydroperiod.

Acre Job: 19065
Drawn By: L. Emenhiser
Figure 1 of 8
Date: 09.25.2019
Rev #:

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WETLAND RATING NOTES
D.R. HORTON - 1711 TERRACE AVE.
SNOHOMISH, WA
TAX PARCEL NOS. 28060700103600 & 20860800202100.

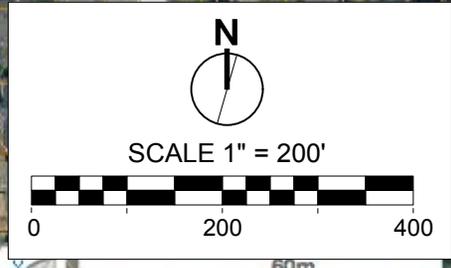
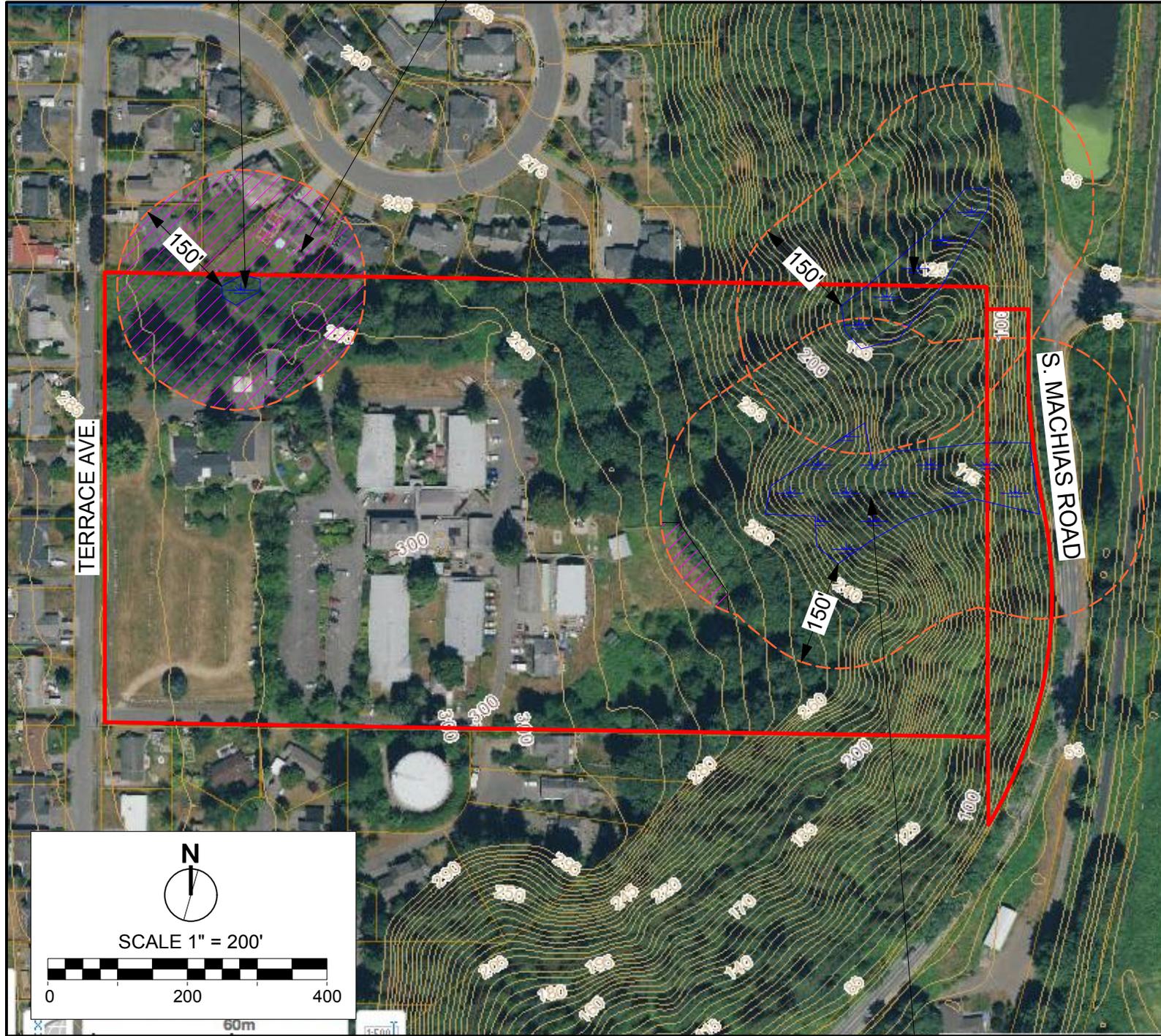
PREPARED BY:
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Wetland C Rating Unit

Pollution generating areas (typ.)

Wetland A Rating Unit



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WETLAND RATING MAP
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SNOHOMISH, WA
TAX PARCEL NOS. 28060700103600 & 20860800202100.

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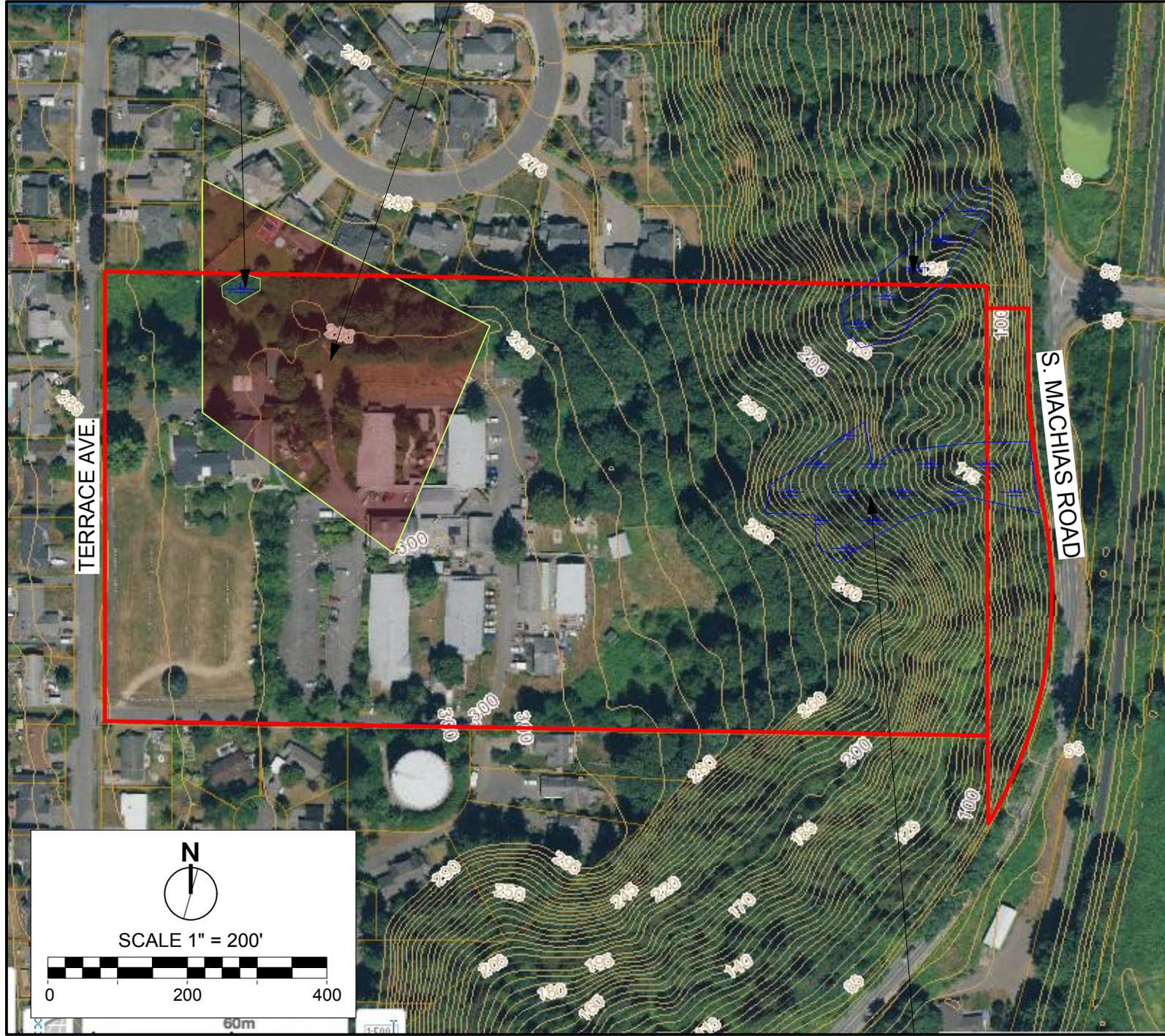
Acre Job: 19065
Drawn By:
L. Emmerhiser
Figure 2 of 8
Date: 09.25.2019
Rev #:

Wetland B Rating Unit

Wetland C Rating Unit

Contributing Basin for Wetland C

Wetland A Rating Unit



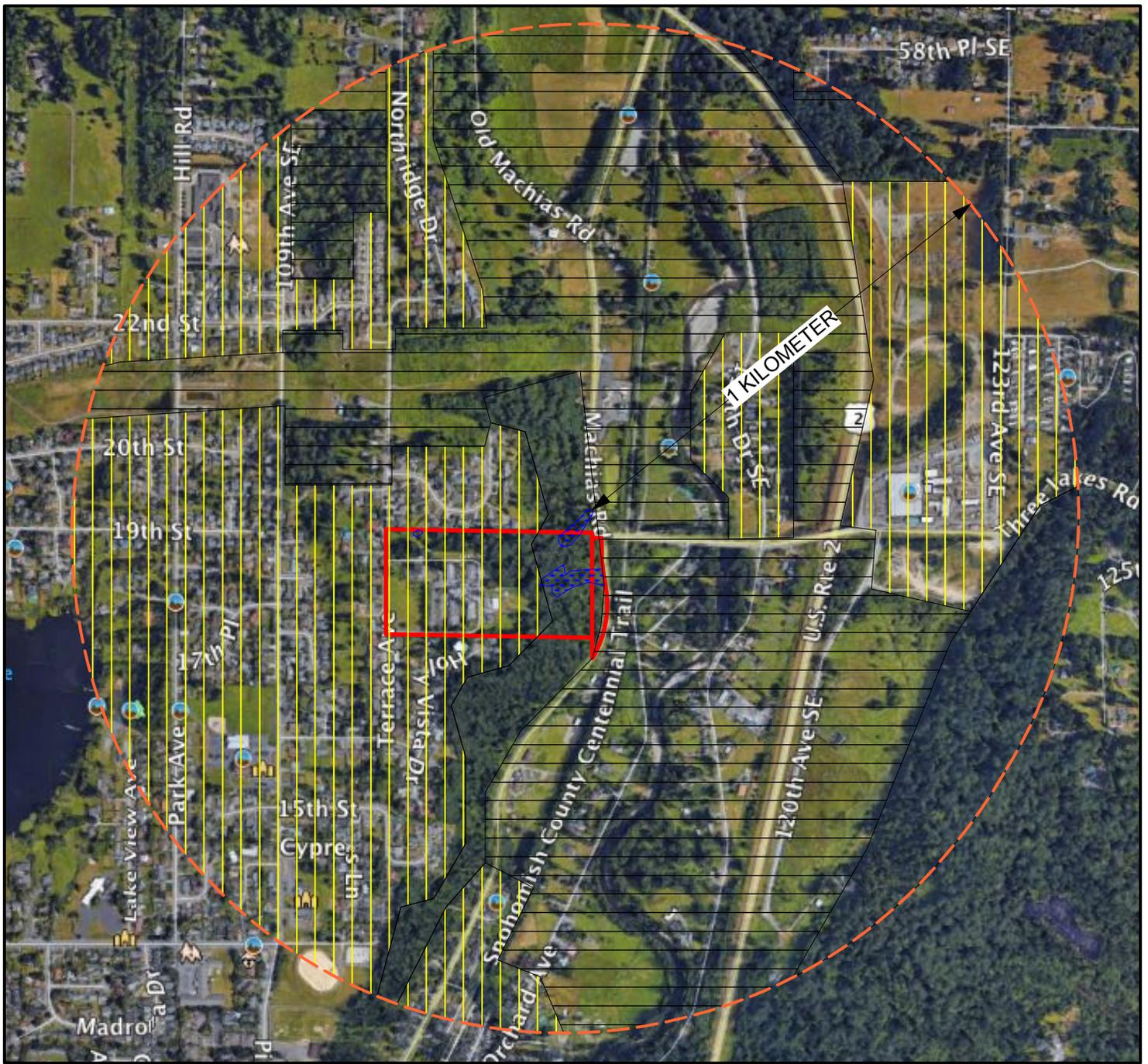
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CONTRIBUTING BASIN MAP
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 SNOHOMISH, WA
 TAX PARCEL NOS. 28060700103600 & 20860800202100.

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Acre Job #: 19065
 Drawn By:
 L. Emmerhiser
 Figure 3 of 8
 Date: 09.25.2019
 Rev #:

Wetland B Rating Unit

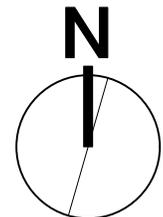


LEGEND

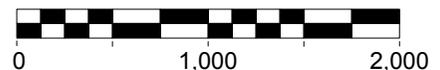
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-  HIGH INTENSITY LAND USE
-  MODERATE, AND LOW INTENSITY LAND USE
-  RELATIVELY UNDISTURBED LAND
-  ONE KILOMETER POLYGON LINE

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'



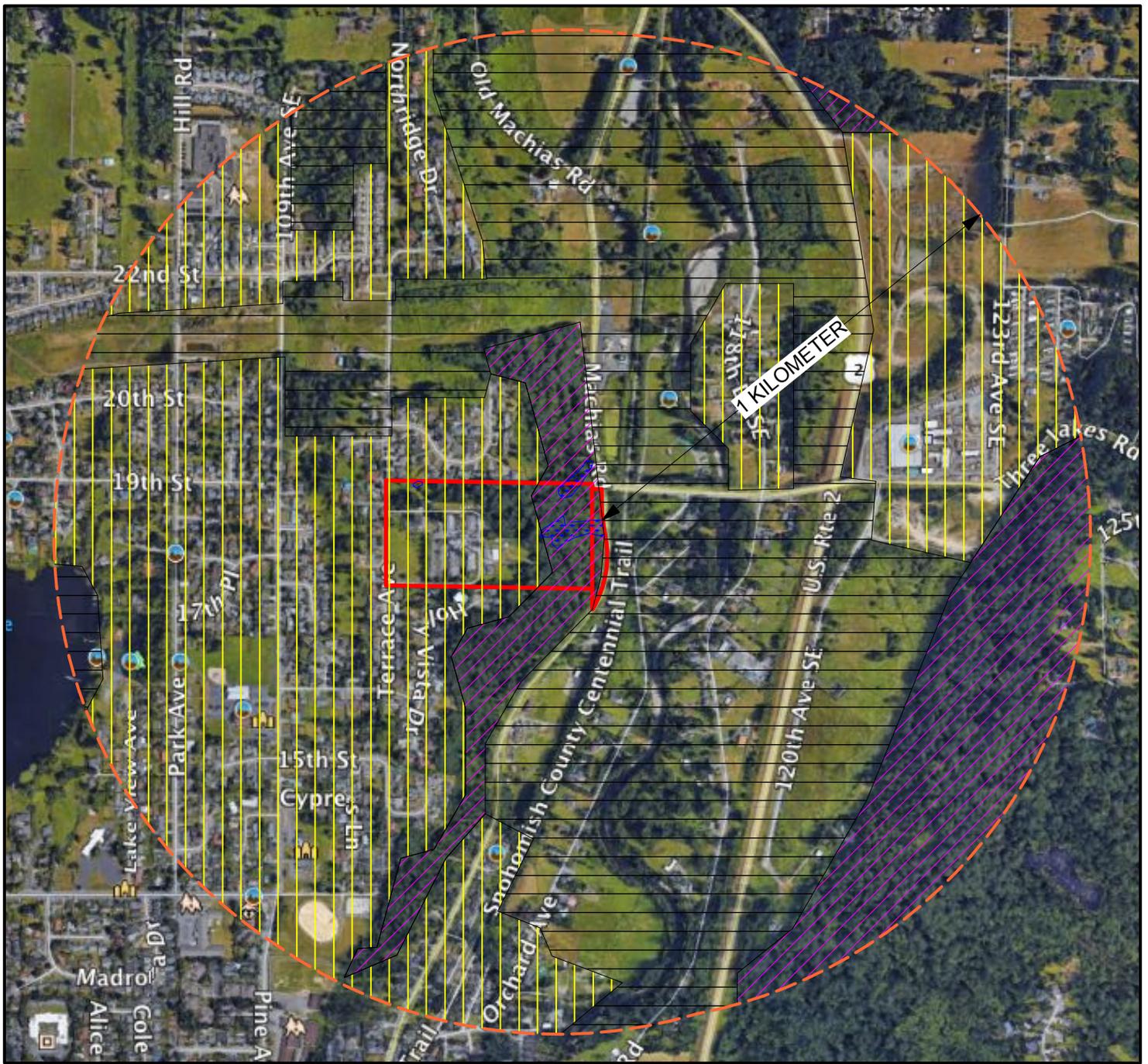
Acre Job: 19065
 Drawn By: L. Emehiser
 Figure 4 of 8
 Date: 09.27.2019
 Rev #:

PREPARED FOR:
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1KM POLYGON MAP (UNDISTURBED & ACCESSIBLE HABITAT)
 D.R. HORTON - 1711 TERRACE AVE. (WET A)
 SNOHOMISH, WA
 TAX PARCEL NOS. 28060700103600 & 20860800202100.

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 Email: louis@acreenvironmental.com



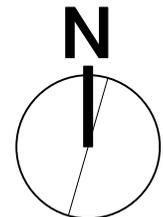


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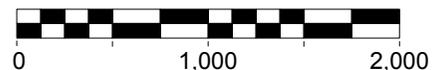
-  SUBJECT WETLANDS
-  HIGH INTENSITY LAND USE
-  MODERATE, AND LOW INTENSITY LAND USE
-  RELATIVELY UNDISTURBED LAND
-  ONE KILOMETER POLYGON LINE

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'



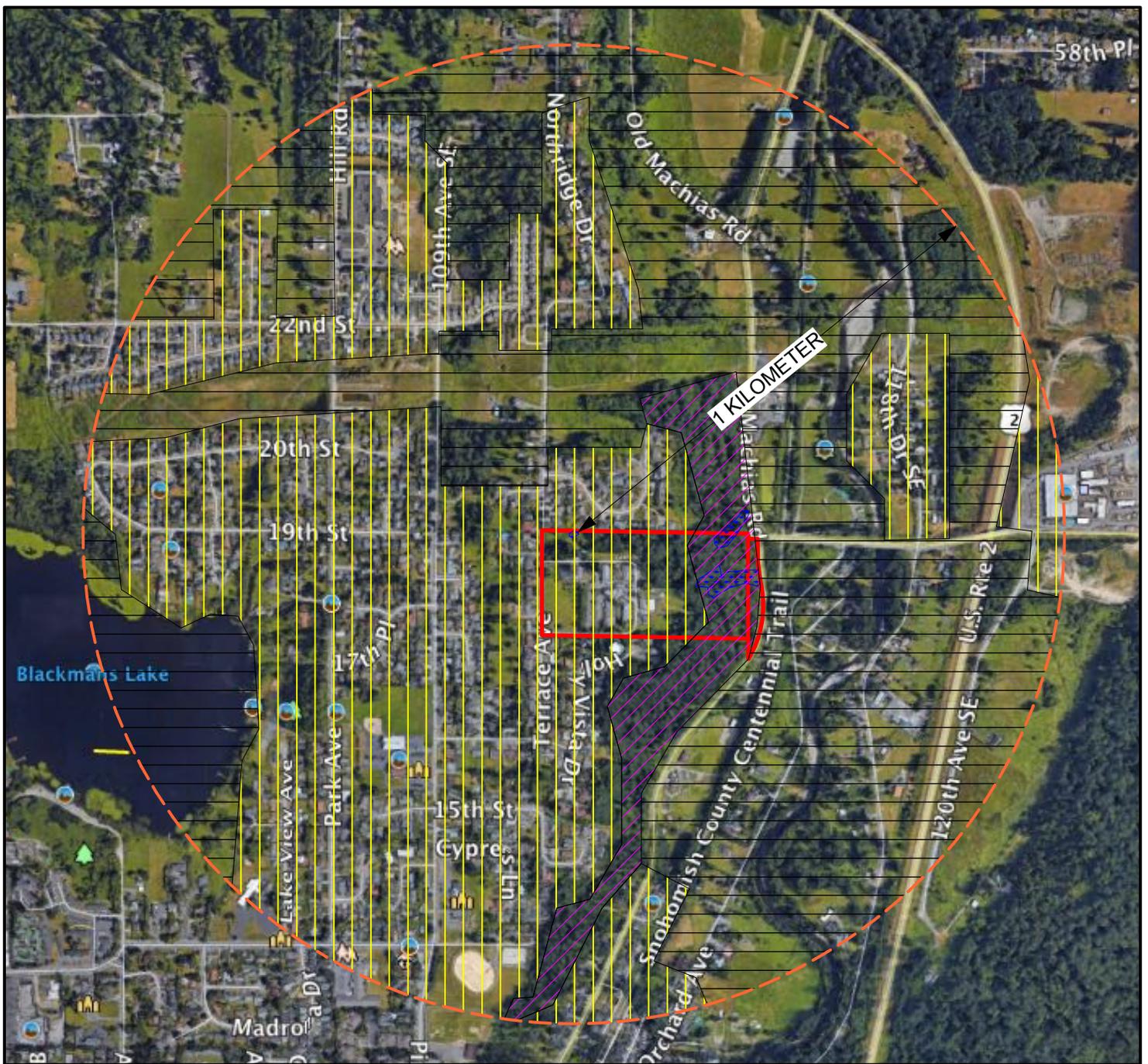
Acre Job: 19065
 Drawn By: L. Emehiser
 Figure 5 of 8
 Date: 09.27.2019
 Rev #:

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1KM POLYGON MAP (UNDISTURBED & ACCESIBLE HABITAT)
 D.R. HORTON - 1711 TERRACE AVE. (WET B)
 SNOHOMISH, WA
 TAX PARCEL NOS. 28060700103600 & 20860800202100.

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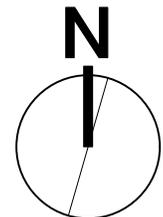


LEGEND

-  SUBJECT WETLANDS
-  HIGH INTENSITY LAND USE
-  MODERATE, AND LOW INTENSITY LAND USE
-  RELATIVELY UNDISTURBED LAND
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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'



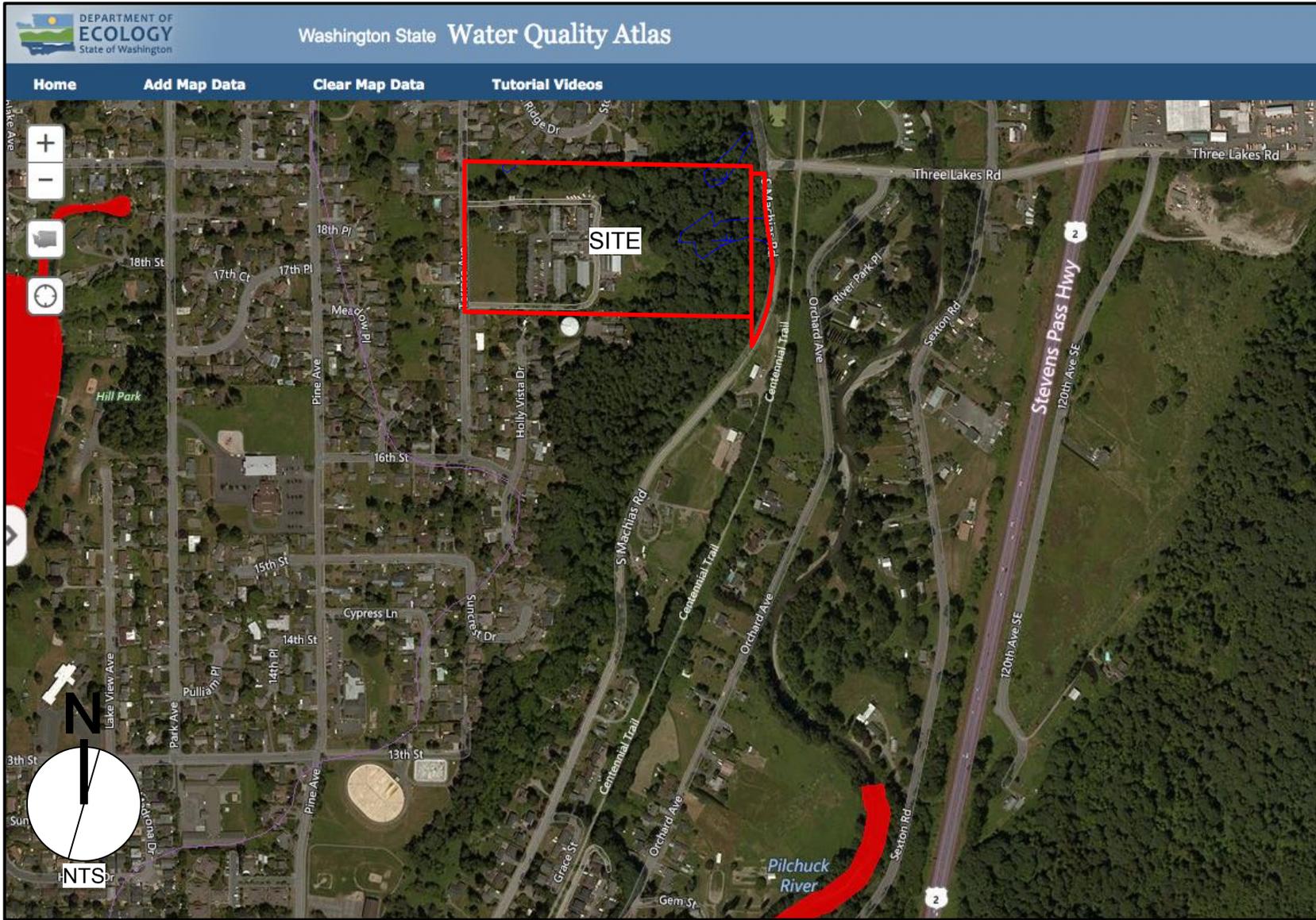
Acre Job: 19065
 Drawn By: L. Emehiser
 Figure 6 of 8
 Date: 09.27.2019
 Rev #:

PREPARED FOR:
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1KM POLYGON MAP (UNDISTURBED & ACCESIBLE HABITAT)
 D.R. HORTON - 1711 TERRACE AVE. (WET C)
 SNOHOMISH, WA
 TAX PARCEL NOS. 28060700103600 & 20860800202100.

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S3.1 The subject wetlands drain directly (within 1 mile) of the Pilchuck River listed on the 303(d) list.

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

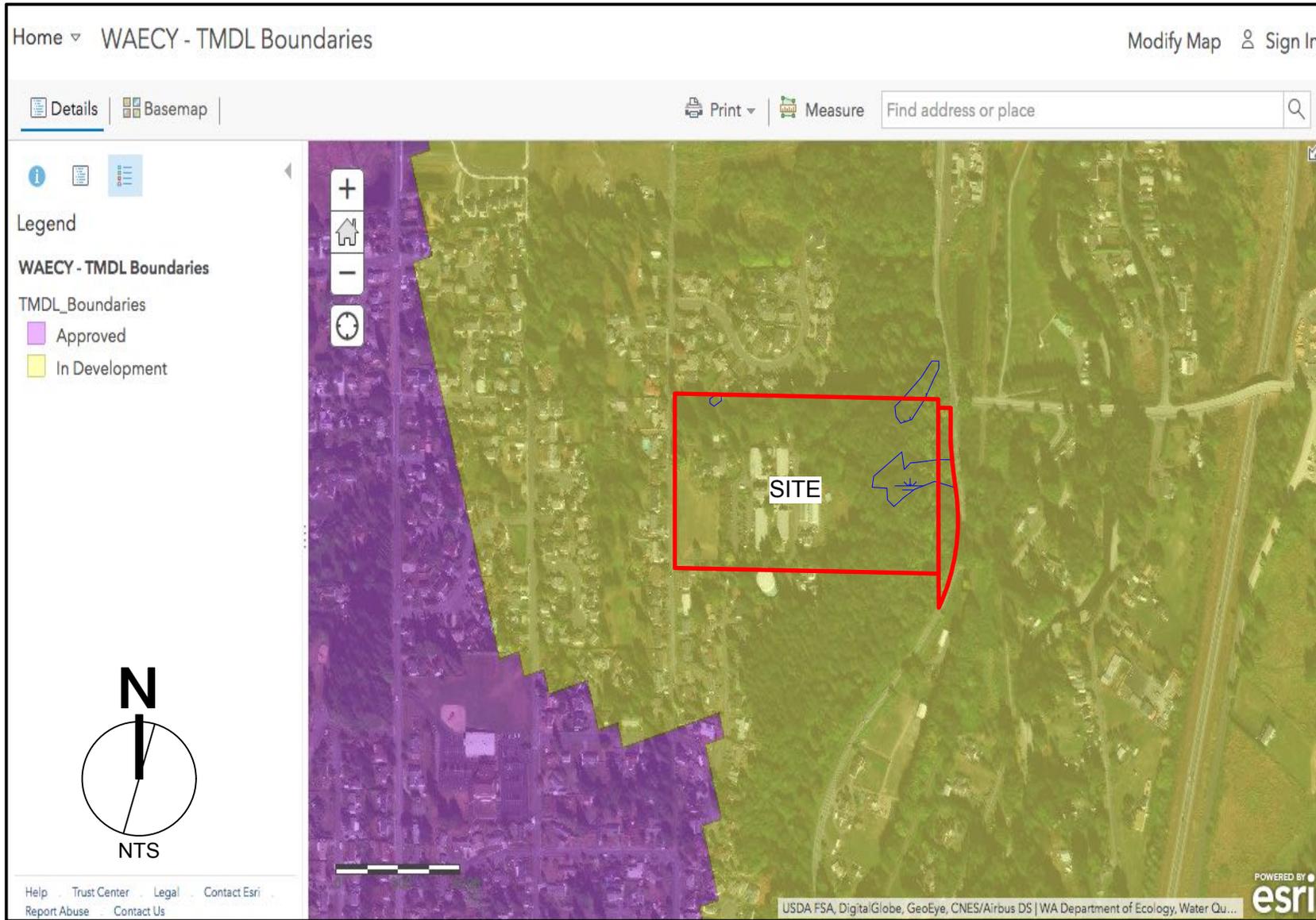


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DOE 303(d) Waters in Basin (Screen Capture)
 D.R. HORTON - 1711 TERRACE AVE.
 SNOHOMISH, WA
 TAX PARCEL NOS. 28060700103600 & 208608000202100.

PREPARED FOR:
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Acre Job: 19065
 Drawn By:
 L. Emehiser
 Figure 7 of 8
 Date: 09.25.2019
 Rev #:



S3.3 Based on the Department of Ecology's TMDL Boundaries webpage, TMDL's are in development for the Basin in which this wetland rating unit is found.



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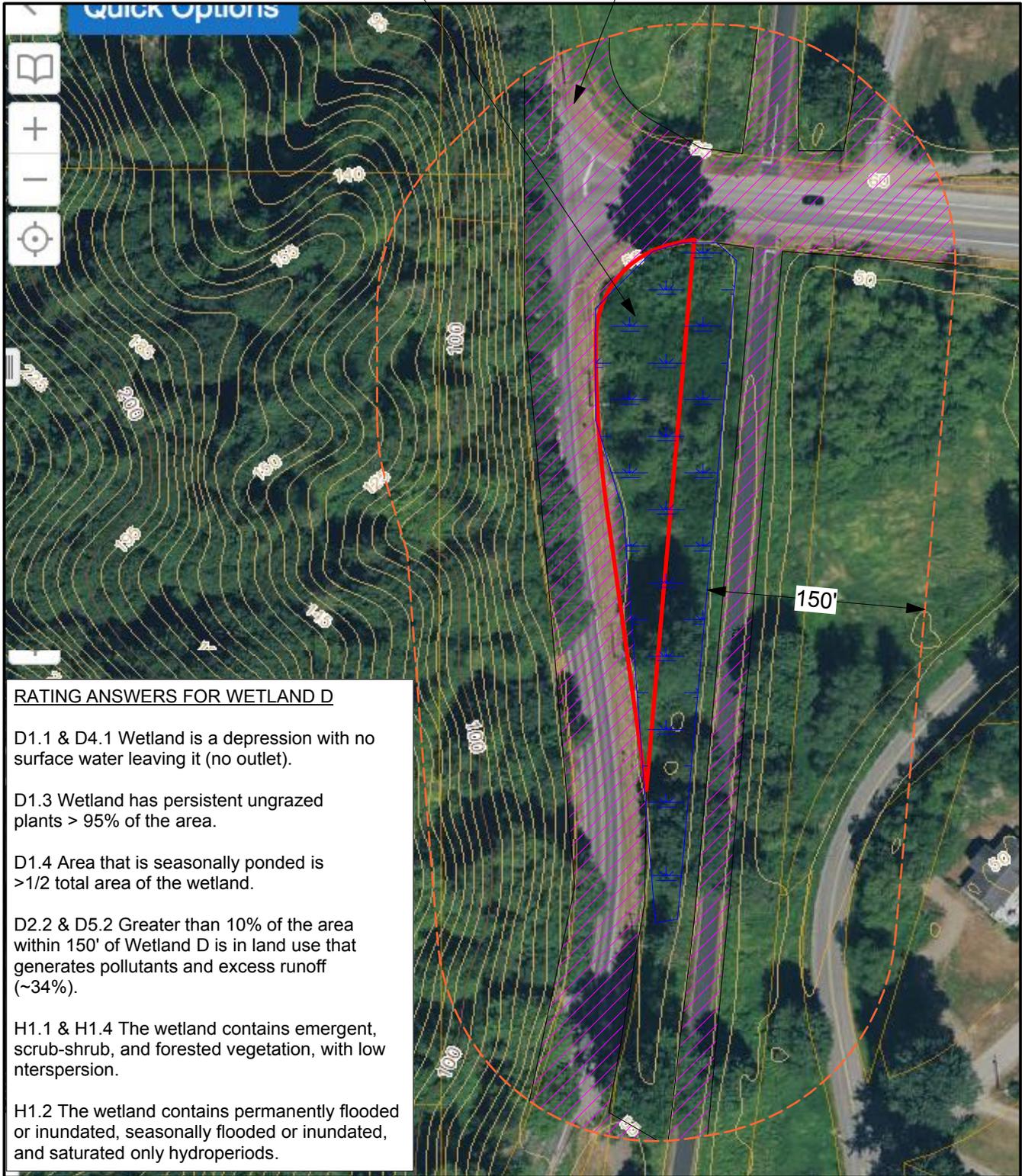
TMDL'S FOR WR1A 7 (Screen Capture)
 D.R. HORTON - 1711 TERRACE AVE.
 SNOHOMISH, WA
 TAX PARCEL NOS. 28060700103600 & 20860800202100.

PREPARED FOR:
 D.R. Horton
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Acre Job: 19065
 Drawn By:
 L. Emenhiser
 Figure 8 of 8
 Date: 09.26.2019
 Rev #:

Wetland D Rating Unit

Pollution generating areas (typ.)



RATING ANSWERS FOR WETLAND D

D1.1 & D4.1 Wetland is a depression with no surface water leaving it (no outlet).

D1.3 Wetland has persistent ungrazed plants > 95% of the area.

D1.4 Area that is seasonally ponded is >1/2 total area of the wetland.

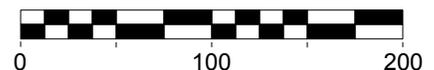
D2.2 & D5.2 Greater than 10% of the area within 150' of Wetland D is in land use that generates pollutants and excess runoff (~34%).

H1.1 & H1.4 The wetland contains emergent, scrub-shrub, and forested vegetation, with low interspersions.

H1.2 The wetland contains permanently flooded or inundated, seasonally flooded or inundated, and saturated only hydroperiods.



SCALE 1" = 100'



Acre Job: 19065
 Drawn By: L. Emehiser
 Figure 1 of 5
 Date: 04.20.2020
 Rev #:

PREPARED FOR:
 D.R. Horton
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WETLAND RATING MAP
 D.R. HORTON - 1711 TERRACE AVE.
 SNOHOMISH COUNTY, WA
 TAX PARCEL NOS. 2086080020100

PREPARED BY:
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Contributing Basin for Wetland D

Wetland D Rating Unit



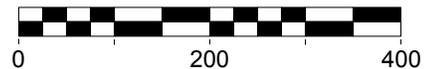
RATING ANSWERS FOR WETLAND D

D4.3 the contributing basin for Wetland D is ~338,155 square feet in size / the ~25,755 square foot wetland rating unit = 13.12 (basin is 10 to 100 times the area of the unit).

D5.3 Greater than 25% of the contributing basin of Wetland D is covered with intensive land uses (~31%).



SCALE 1" = 200'



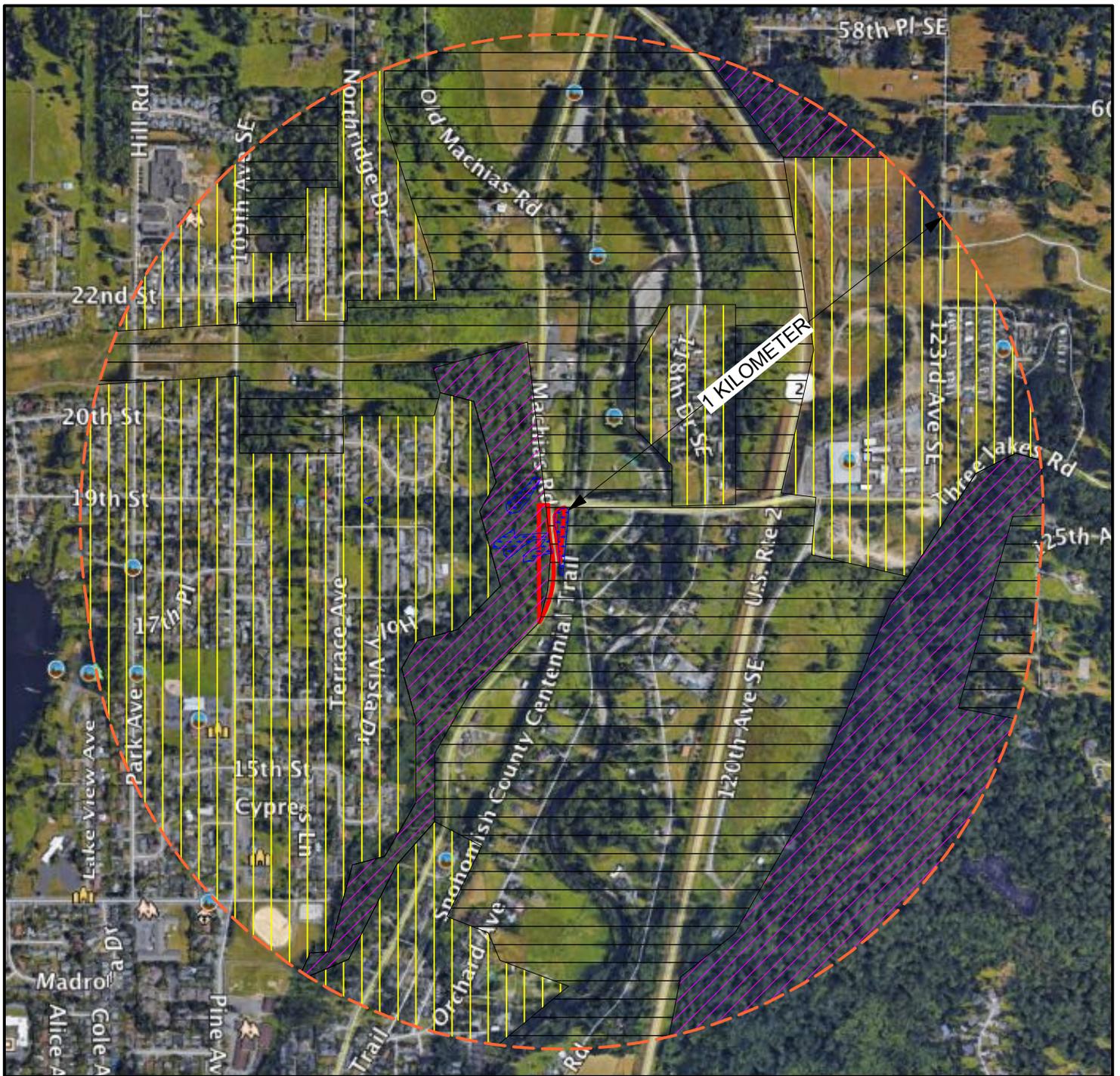
Acre Job: 19065
Drawn By:
L. Emehiser
Figure 2 of 5
Date: 04.20.2020
Rev #:

PREPARED FOR:
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CONTRIBUTING BASIN MAP
D.R. HORTON - 1711 TERRACE AVE.
SNOHOMISH COUNTY, WA
TAX PARCEL NOS. 20860800202100

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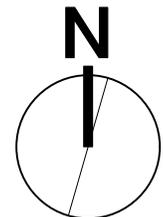


LEGEND

-  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'



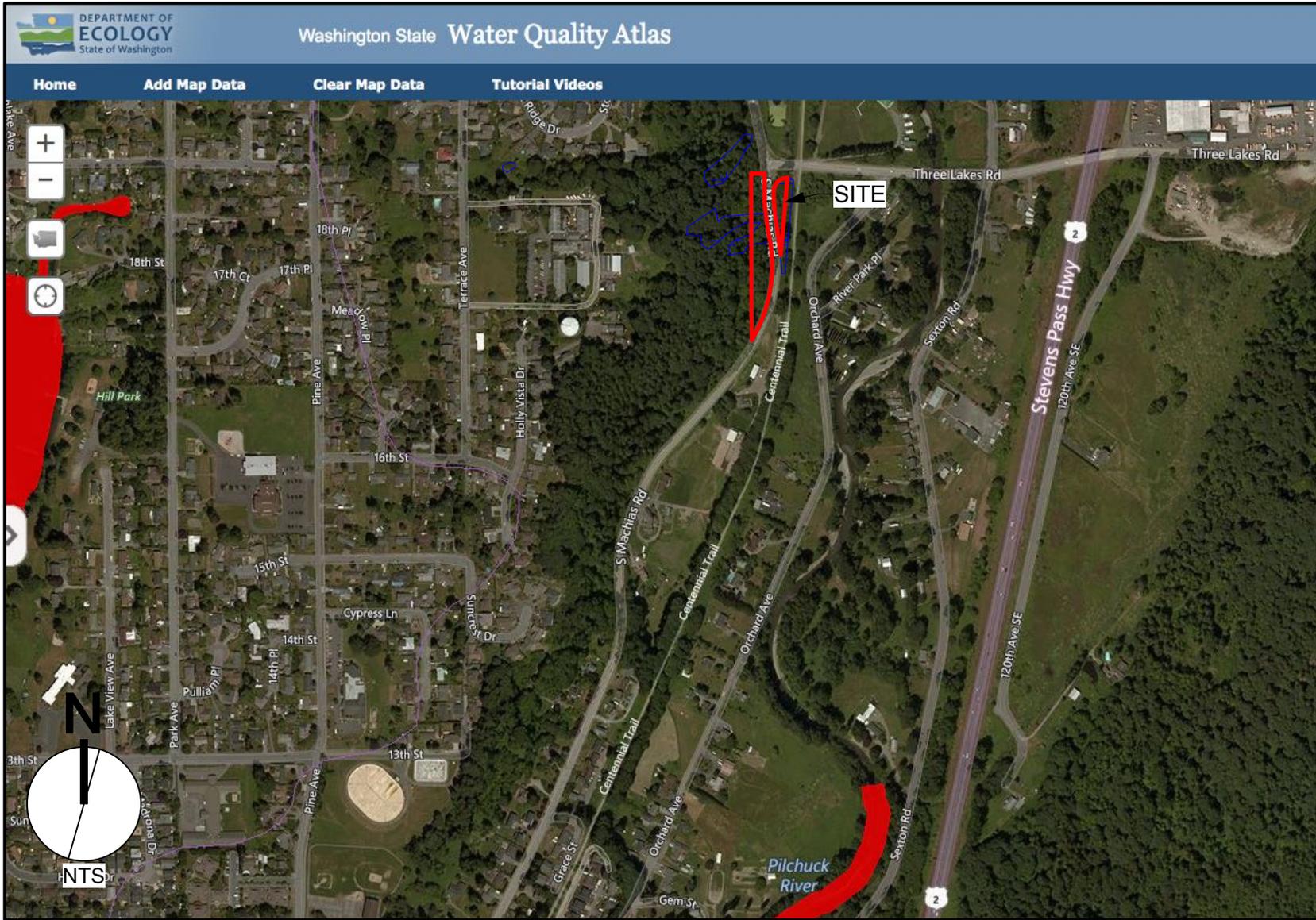
Acre Job: 19065
 Drawn By:
 L. Emenhiser
 Figure 3 of 5
 Date: 04.20.2020
 Rev #:

PREPARED FOR:
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1KM POLYGON MAP (UNDISTURBED & ACCESSIBLE HABITAT)
 D.R. HORTON - 1711 TERRACE AVE.
 SNOHOMISH COUNTY, WA
 TAX PARCEL NOS. 20860800202100

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S3.1 The subject wetland drains directly (within 1 mile) of the Pilchuck River 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.

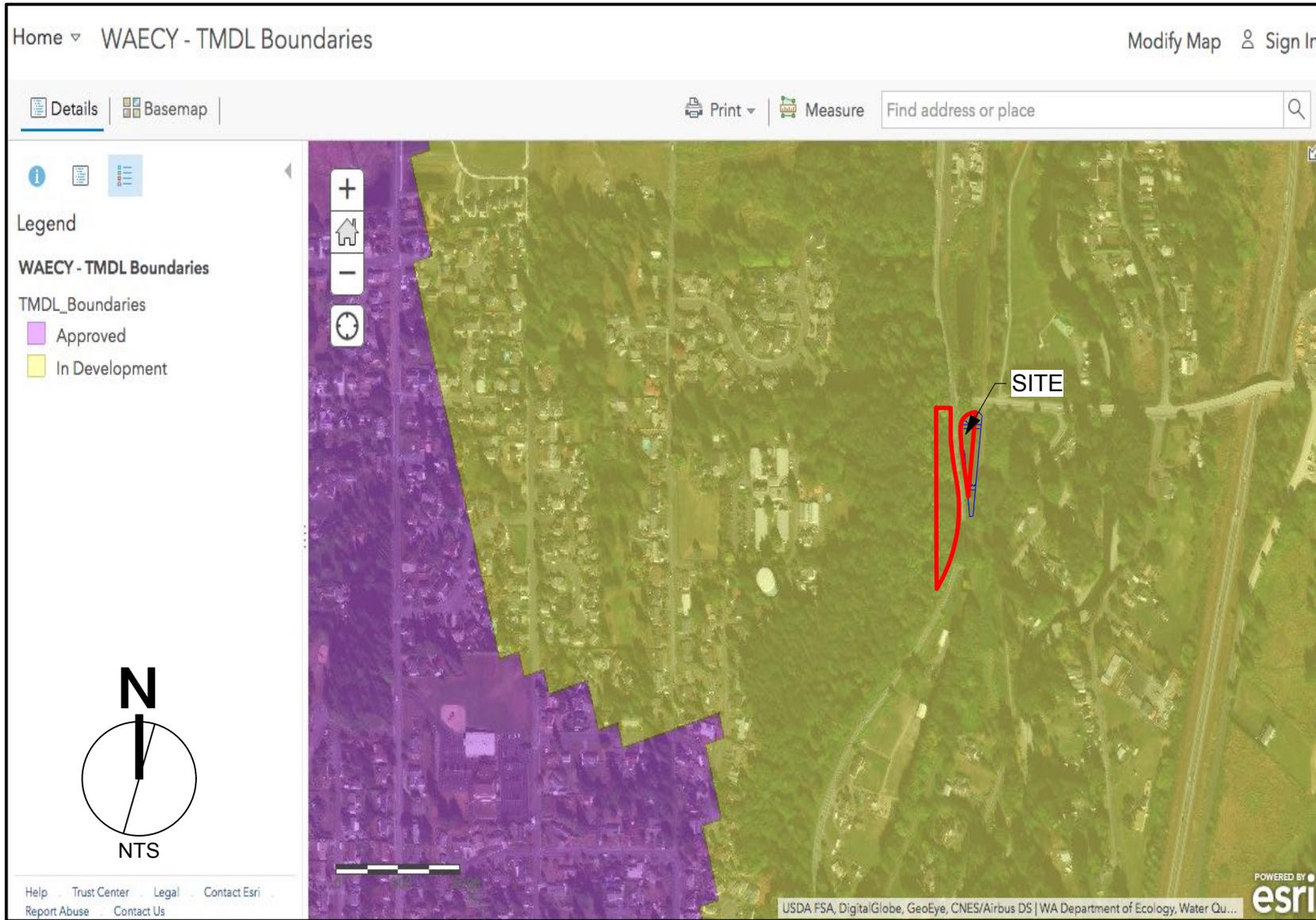


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DOE 303(d) Waters in Basin (Screen Capture)
 D.R. HORTON - 1711 TERRACE AVE.
 SNOHOMISH COUNTY, WA
 TAX PARCEL NOS. 20860800202100

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 Suite 200
 Kirkland, WA 98033

Acre Job #: 19065
 Drawn By:
 L. Emehiser
 Figure 4 of 5
 Date: 04.20.2020
 Rev #:



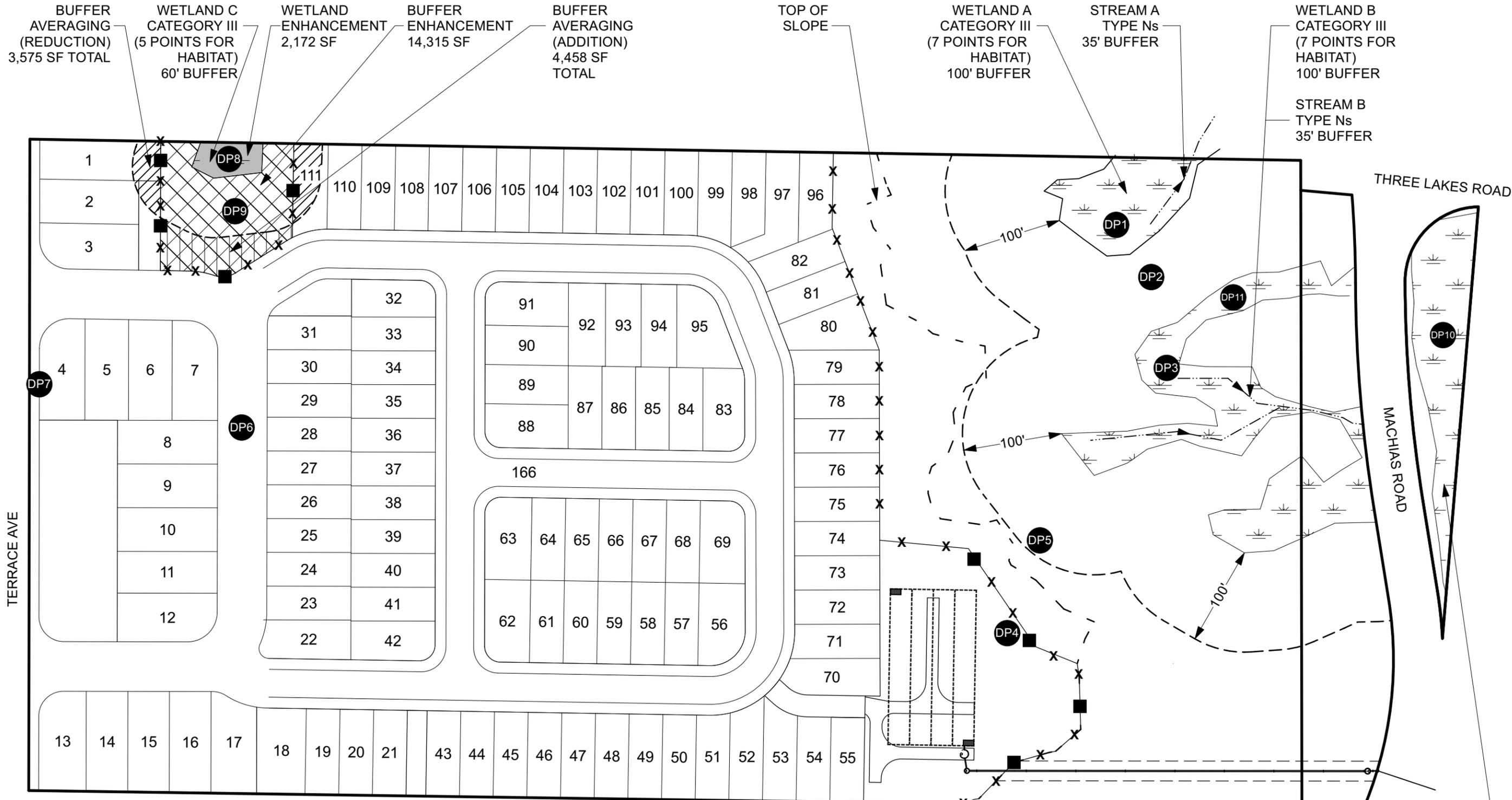
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TMDL'S FOR WR1A 7 (Screen Capture)
 D.R. HORTON - 1711 TERRACE AVE.
 SNOHOMISH COUNTY, WA
 TAX PARCEL NOS. 20860800202100.

PREPARED FOR:
 D.R. Horton
 11241 Slater Avenue NE
 Suite 200
 Kirkland, WA 98033

Acre Job: 19065
 Drawn By:
 L. Emenhiser
 Figure 5 of 5
 Date: 04.20.2020
 Rev #:

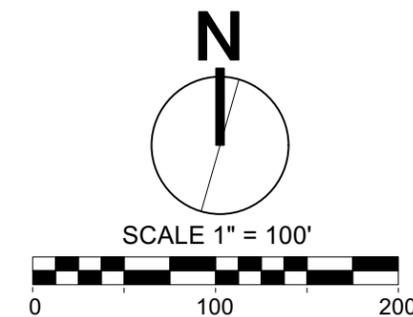
S3.3 Based on the Department of Ecology's TMDL Boundaries webpage, TMDL's are in development for the Basin in which this wetland rating unit is found.



TERRACE AVE

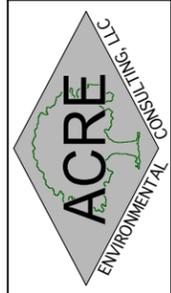
THREE LAKES ROAD

MACHIAS ROAD



LEGEND			
	WETLAND		BUFFER AVERAGING (REDUCTION)
	STREAM		BUFFER AVERAGING (ADDITION)
	STEEP SLOPE		WETLAND ENHANCEMENT
	BUFFER		DATA POINT (10 TOTAL)
	BUFFER ENHANCEMENT		NGPA SIGN
	TWO-RAIL FENCE		

MAP SHEET:
 CA1.00



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CRITICAL AREA STUDY & MITIGATION MAP
 WALSH HILLS - 1711 TERRACE AVENUE
 SNOHOMISH, WA
 TAX PARCEL NOS. 28060700103600 & 28060800202100.

PREPARED FOR:
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Acre Job: 19065
 Drawn By:
 L. Emehiser
 Date: 05.15.2020
 Rev 2: 10.26.2020