

Huguet-Kroman RUE
PLN51228 RUE

Public Hearing: February 25, 2021
Virtual Hearing via Zoom

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Department of Planning and Community Development

Staff Report

Project Huguet-Kroman RUE
File No. PLN51228 RUE
Date February 25, 2021
To City of Bainbridge Island Hearing Examiner
Project Manager Annie Hillier, Associate Planner

Request	The request is for a reasonable use exception (RUE) to allow development of a single-family residence and garage within a wetland buffer. Onsite wetland buffer enhancement is proposed to compensate for impacts to the critical area.
Address	**no situs address**, Bainbridge Island, WA 98110
Tax Assessor #	34260240332007
Environmental Review	The project is exempt from the State Environmental Policy Act (SEPA) under WAC 197-11-800(6)(a).

Hearing Examiner Review

The hearing examiner shall review the reasonable use exception (RUE) application and conduct a public hearing pursuant to the provisions of BIMC 2.16.100. The hearing examiner shall approve, approve with conditions, or deny the request based on the proposal's compliance with all of the RUE review criteria, described in Part VII of the staff report.

Staff Recommendation

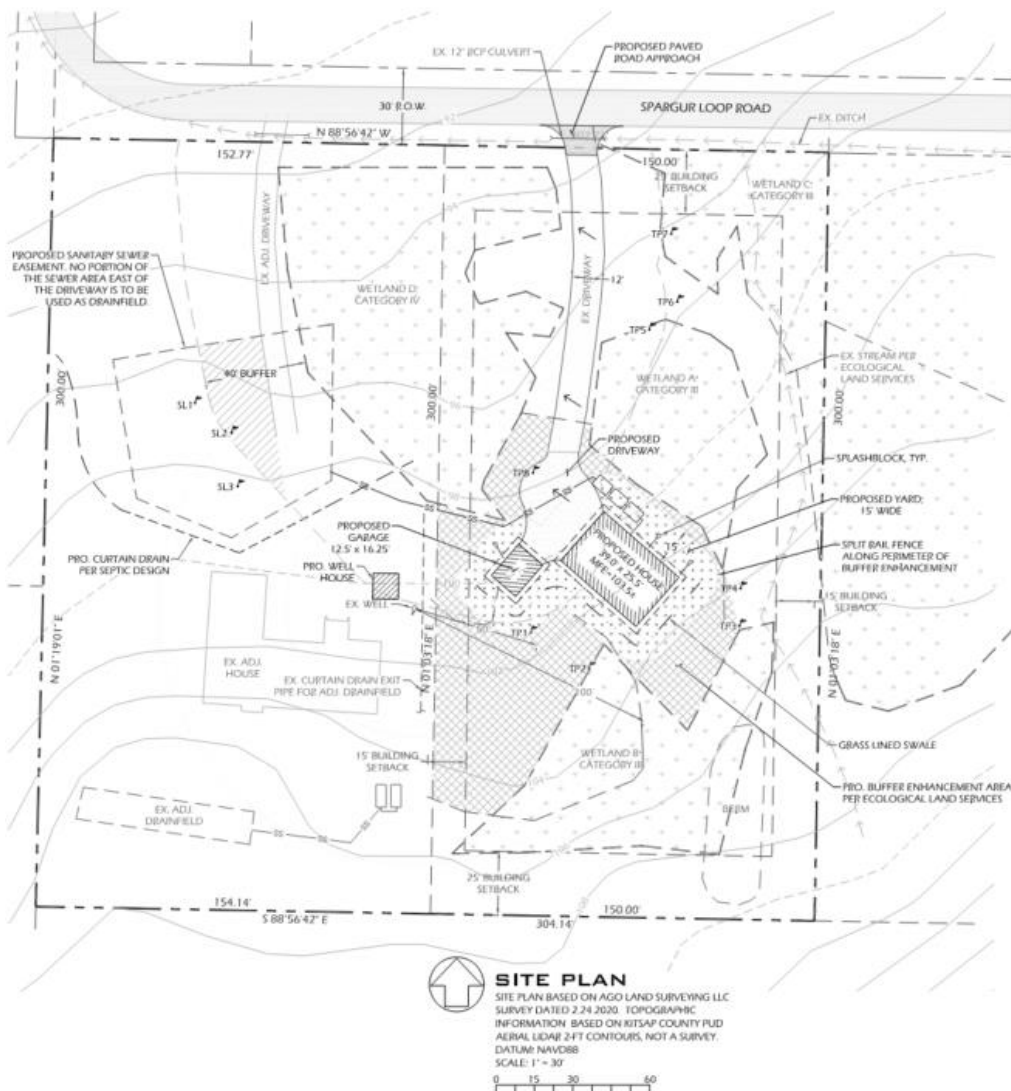
Approval of the RUE, with conditions.

Part I: SUMMARY OF PROPOSAL AND STAFF RECOMMENDATION

The proposal is for a single-family residence (SFR) and garage on a lot encumbered with wetlands and wetland buffers. An existing driveway will be utilized to access the SFR, which is proposed in an area currently consisting of mowed grass and invasive blackberries. The septic drainfield is proposed on the adjacent lot to the west, which is under the same ownership, because this is the only area within the vicinity with adequate soils to accommodate a drainfield. The area of the proposed drainfield is also located within a wetland buffer. Mitigation in the form of buffer enhancement is proposed on the subject property, to compensate for impacts to the critical areas from both the drainfield and the SFR/garage. The applicant requests a reasonable use exception (RUE) to develop the property and install the septic drainfield in accordance with BIMC 16.20.080, as the parcel is completely encumbered by wetlands and wetland buffers.

As conditioned, the project meets the eleven decision criteria for RUE review and approval in BIMC 16.20.080.F.

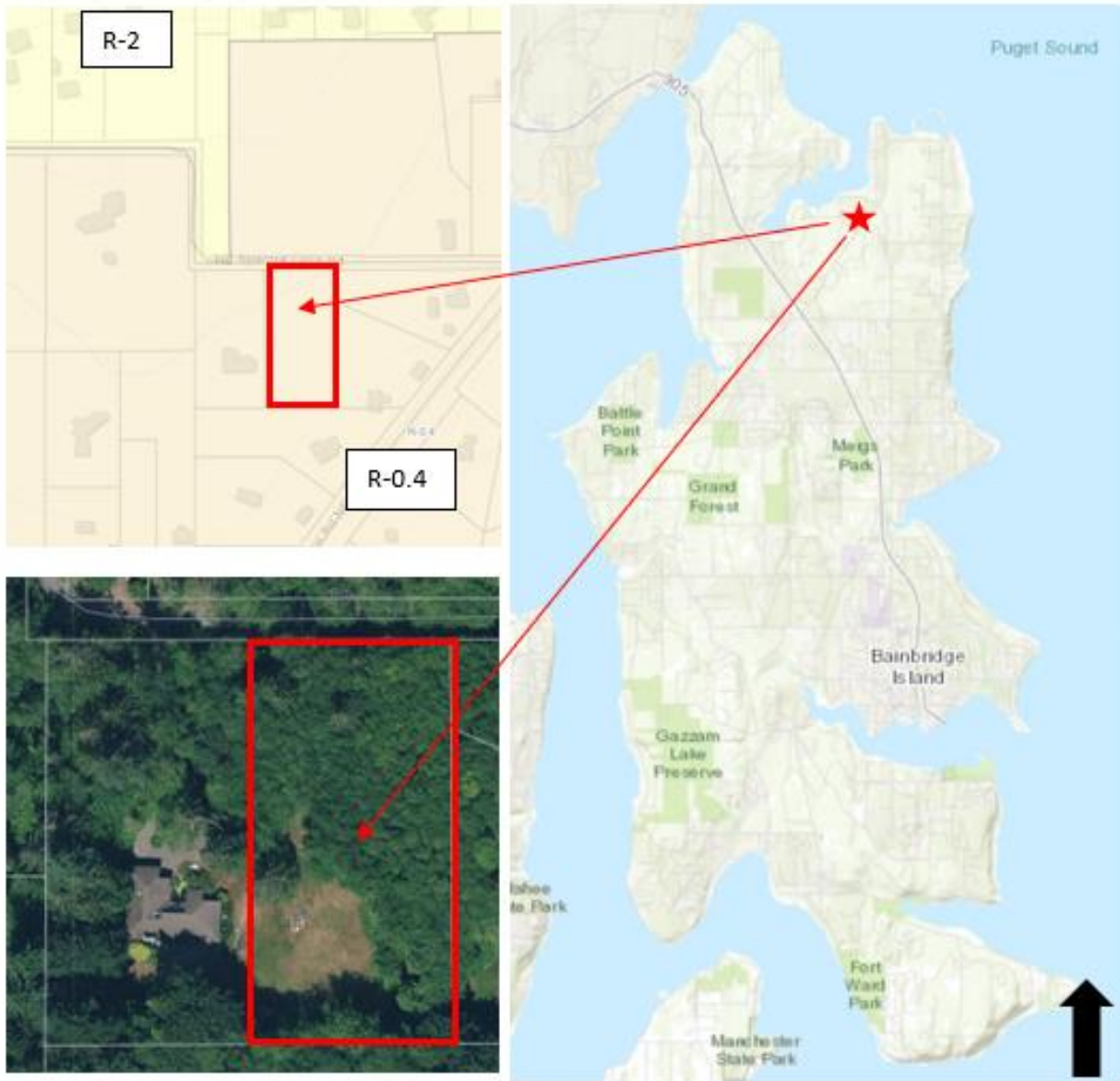
Figure 1 – Site Plan



Part II: GENERAL INFORMATION AND SITE CHARACTERISTICS

Assessor's Record Information:	
Tax lot number	34260240332007
Owner of record	Emily Kroman and Justin Huguet
Lot size	1.03 acres (44,866.8 sq. ft.)
Terrain:	
The site is relatively flat with less than 15 feet of grade change from north to south.	
Site Development:	
The southwest portion of the site contains mowed lawn, and an existing driveway serves this area. The lawn area is continuous with the lawn on the adjoining western property because both properties are under the same ownership and regularly maintained together.	
Access:	
The site is accessed off of NE Spargur Loop Rd.	
Public Services:	
Police	City of Bainbridge Island Police Department
Fire	Bainbridge Island Fire District
Schools	Bainbridge Island School District
Water	well
Sewer	n/a – septic proposed
Surrounding Uses:	
Surrounding uses are single-family residential.	
Existing Zoning:	
The site is zoned R-0.4, 1 unit per 2.5 acres.	
Surrounding Zoning:	
The surrounding zoning is R-0.4, 1 unit per 2.5 acres. To the north, there are properties zoned R-2, 2 units per acre.	
Existing Comprehensive Plan Designation:	
The Comprehensive Plan designates the site as a Residential District area.	
Surrounding Comprehensive Plan Designation:	
The Comprehensive Plan designates the surrounding area as a Residential District area.	

Figure 2 – Vicinity Map, Aerial Image, and Zoning:



Part III: APPLICATION BACKGROUND

Date:	Action:
August 14, 2018	Preapplication conference held
August 20, 2018	Preapplication summary sent to applicant (Exhibit 2)
November 27, 2019	Application for RUE submitted (Exhibit 3)
December 23, 2019	Application deemed incomplete (Exhibit 4)
March 18, 2020	Application deemed complete (Exhibit 5)
March 27, 2020	Notice of Application and Hearing published (Exhibit 6)
April 29, 2020	Information Request memo sent to applicant (Exhibit 8)

Various	The applicant and City staff emailed back and forth about the items requested in the info request memo, including the alternatives analysis and the septic system. During this time, staff noticed that in a revised version of the site plan, the septic line was changed to route through a wetland, instead of around it. This change was added to the site plan in order to meet the Kitsap Public Health District's (KPHD) setback to the existing well. Staff asked the applicant to consider revising, as such a proposal would require SEPA review and on-site sewage facilities are prohibited in wetlands (BIMC 16.20.140.G). The applicant requested that the alternatives analysis be completed at the time of the building permit submittal (discussed further below). The applicant spent several months working with KPHD and their septic designer, and received a waiver from the KPHD that will allow the septic line to be constructed outside of the wetland and within the setback to the well. Final documentation from KPHD will be required at the time of the building permit application.
July 27, 2020	The applicant submitted additional information addressing the info request memo, including a final wetland delineation and mitigation plan (Exhibit 9). However, the wetland report will require a final update as a part of the building permit application, described in Condition 5.
January 5, 2020	The applicant submitted a site plan and septic plan, addressing the issues discussed above (Exhibits 10 and 11).

Part IV: PUBLIC COMMENTS

No public comments were received during the 21-day comment period. One comment was received after the comment period ended, which is available in the project file.

Part V: AGENCY COMMENT

Agency:	Action:
Fire District	Approved, with conditions (Exhibit 12) (Note: Applicant reviewed Fire District comments and determined driveway widening or paving is not necessary, based on existing conditions, which are shown on the site plan.)
City Development Engineering	Approved with conditions (Exhibit 13)
Health District	Completed, waiver approved for septic line within 50' of well (per note in file). No further comments. (Exhibit 14)

Part VI: COMPREHENSIVE PLAN ANALYSIS

The following Comprehensive Plan goals and policies apply to the proposal:

1. Environmental Element

Goal EN-1: Preserve and enhance Bainbridge Island's natural systems, natural beauty and environmental quality.

Goal EN-4: Encourage sustainable development that maintains diversity of healthy, functioning ecosystems that are essential for maintaining our quality of life and economic viability into the future.

Goal EN-5: Protect and enhance wildlife, fish resources and ecosystems.

Staff response: An RUE balances private property rights with necessary and reasonable regulation to protect the island's finite environmental resources. The applicant is proposing to enhance a wetland buffer that is currently degraded, and to install split-rail fencing along the enhanced buffer edge to prevent intrusion. The project is conditioned utilize non-leaching roofing and restrict herbicide and pesticide use to ensure long term protection of the wetlands after the introduction of the residential use. The project is also conditioned to analyze the feasibility of the minimal excavation foundation systems per the 2012 Low Impact Development Guidance Manual for Puget Sound as a means of minimizing impacts to the site and adjacent stream. As conditioned, the project meets the goals of the Comprehensive Plan referenced above.

2. Land Use Element

Policy LU 14.1: The Residential District area is designated for less intensive residential development and a variety of agricultural and forestry uses.

Staff response: The proposal is for a single-family residence with limited lot coverage, consistent with the policy stated above.

Part VII: LAND USE CODE ANALYSIS

The following Bainbridge Island Municipal Code (BIMC) regulations apply to the proposal:

1. BIMC Title 18 Zoning

A. 18.06.020 Purpose

The purpose of the R-0.4 zone is to provide low-density housing in an environment with special Island character consistent with other land uses, such as agriculture and forestry, and the preservation of natural systems and open space. The low density of housing does not require the full range of urban services and facilities.

Staff response: The proposal is for the construction of one home and the preservation of the wetland buffer outside of the area impacted by the development.

B. 18.09.020 Permitted Uses

Residential uses, including single-family dwellings, are permitted in the R-0.4 zone.

Staff response: The request is for the construction of a single-family residence and garage, to support a residential use allowed this zone.

C. 18.12.010 Dimensional Standards

Maximum Density and Minimum Lot Dimensions

The minimum lot area per dwelling unit is 100,000 square feet, with a minimum lot depth and width of 110 feet.

Staff response: The lot area is 44,866.8 sq. ft. The lot width is approximately 150 ft. and the depth is approximately 300 ft. The lot is nonconforming to the minimum lot area for the R-0.4 zoning designation. Pursuant to BIMC 18.30.050, any nonconforming single lot, tract or parcel of land that was lawfully created and recorded with the county auditor's office may be used for the purposes permitted by this title notwithstanding the minimum lot area, lot width and lot depth required.

Maximum Lot Coverage

The maximum allowed lot coverage is 10% in R-0.4 zoning.

Staff response: The maximum lot coverage allowed on the lot is 4,486.7 sq. ft. However, the lot coverage is limited to 1,200 sq. ft. as a criterion of approval for the RUE. The proposal does not exceed the 1,200 sq. ft. limitation.

Setbacks

In R-0.4 zoning, the front yard setback is 25 feet. Side setbacks are 15 feet each. The rear setback is 15 feet.

Staff response: The proposal meets the setbacks for R-0.4 zoning.

D. BIMC 18.15.020 Parking and Loading

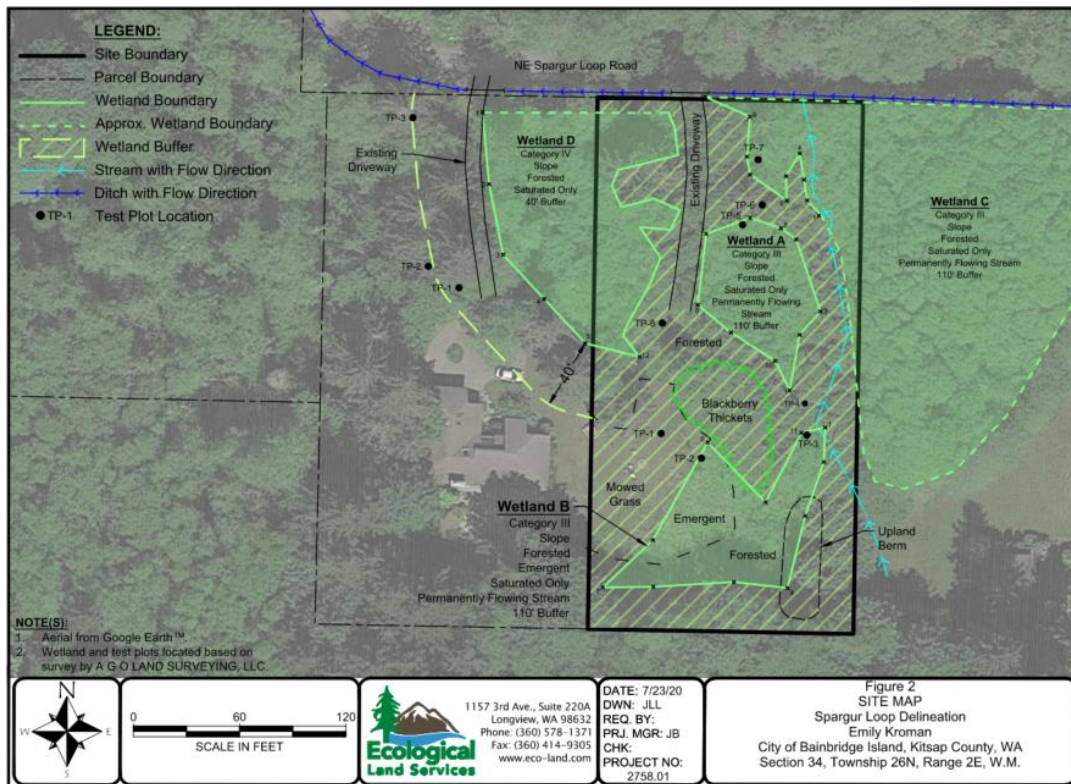
Residential dwelling units are required to provide two spaces for each primary dwelling.

Staff response: The proposal includes a detached garage. Although the application does not specify whether it is a 1-car or 2-car garage, there appears to be adequate room for 1 vehicle to park within the driveway if a 1-car garage is proposed.

2. BIMC Title 16 Environment

The wetland delineation report and mitigation plan submitted with the application (Exhibit 9) identifies 4 wetlands on the subject property. A small, unmapped stream is also identified on the east side of the property. According to the rating forms, Wetlands A-C are category III wetlands and Wetland D is a category IV wetland (note: page 2 of the report states that all wetlands are category III, but this appears to be an error). The buffers extending between these wetlands completely encumber the site. A buffer from the small stream is not identified; restrictions on the property related to an unmapped stream buffer would be the same as for the wetland buffers which overlap in the same area, so additional information about the unmapped stream was not requested. All development is located outside of the stream.

Figure 3 – The subject property is encumbered by 4 wetlands and their corresponding buffers.



A. BIMC 16.20.080 Reasonable Use Exceptions

Applicability and Intent

An applicant may request an RUE pursuant to BIMC 16.20.080.A when a site assessment review pursuant to BIMC 15.20 or a pre-application conference demonstrates that: 1. The subject property is encumbered to such an extent by critical areas and/or critical area buffers that application of this chapter would deny all reasonable use of the subject property; 2. Reasonable use of the subject property cannot be achieved through Buffer Modification (BIMC 16.20.110 and 140) or a Habitat Management Plan (BIMC 16.20.110); and 3. Alternatives to development through an RUE are not available or acceptable.

Staff response: As described in the wetland delineation and buffer mitigation plan, the wetlands and buffer cover the entire property. Buffer modification allows the buffer to be reduced up to 25 percent of its required width. A 25 percent reduction in buffer width does not provide an area free of critical areas because of how closely the wetlands are from one another. A Habitat Management Plan is a report that evaluates measures necessary to maintain, enhance and improve terrestrial and/or aquatic habitat on a proposed development site, and is not applicable to the development proposal or site. The only way for the applicant to develop the site with an SFR is through a reasonable use exception, as discussed during the applicant's preapplication conference.

Reasonable Use Review Criteria

The hearing examiner shall approve, approve with conditions, or deny the request based on the proposal's compliance with all of the RUE review criteria described below. With conditions imposed by the hearing examiner, staff finds that the proposal meets the RUE review criteria.

1. The application of this chapter would deny all reasonable use of the property;

Staff response: The applicant owns and resides at the lot adjacent to the subject property and maintains portions of the subject property as lawn area. BIMC Chapter 16.20 provides a list of exempt activities that are allowed within critical areas, including normal and routine yard and garden activities such as cutting and mowing lawns (BIMC 16.20.040.A.4). As such, the applicant is allowed to continue maintaining the existing yard area on the subject property. However, the City has determined that the lot has development rights in and of itself, and if the applicant sold the lot the City would allow development of an SFR through an RUE. Therefore, the applicant is also allowed to pursue development through an RUE. Staff finds that this decision criterion is met.

2. There is no reasonable alternative to the proposal with less impact to the critical area or its required buffer;

Staff response: "Reasonable alternative" means an activity that could feasibly attain or approximate a proposal's objectives, but at a lower environmental cost or decreased level of environmental degradation (BIMC 16.20.190, #67). The proposal is for a residence, the purpose of which is to provide shelter for a single family. While there are other allowed uses for the R-0.4 zoning district, such as a passive recreation park, that may have less impact to the critical area buffer, the City has not identified alternative uses that would achieve the proposal's objective.

A reasonable alternative to the proposal that could achieve the same objective might be a residence with an attached garage or an under-building garage, as the development would be further concentrated in one area and may impact less of the wetland buffer. The applicant and City staff discussed addressing alternative site layouts prior to building permit issuance, when they are working on the building design. Staff finds this acceptable, as this will allow the applicant to conduct an analysis of alternatives while they are also considering the use of a low-impact development (LID) foundation design – a condition of approval required by the City Development Engineer. As conditioned (Condition 2), staff finds this decision criterion is met.

3. The proposal minimizes the impact on critical areas in accordance with mitigation sequencing (BIMC 16.20.030);

Staff response:

Avoiding impacts
The proposal includes utilizing the existing driveway and siting the SFR within an existing lawn area, avoiding impacts to existing native vegetation on the site.
Minimizing impacts
The proposal includes: <ul style="list-style-type: none">• A garage for parking, which will minimize pollutant runoff from vehicles.

- A split-rail fence is proposed along the edge of the building setback to minimize human intrusion into the critical areas.
- Locating development in areas free of native vegetation and significant trees

Staff finds that the project can be conditioned to further minimize impacts, discussed further below under review criteria #4.

Rectifying impacts

At one point the proposal and wetland report included a septic line in a wetland and proposed to rectify associated impacts. The proposal has since been revised to avoid direct impacts to the wetlands. The area between the SFR and the enhanced buffer edge that will be disturbed from construction will be restored to pre-construction condition (lawn). Staff has not identified any further opportunities to rectify impacts.

Reducing or eliminating impacts

The proposal reduces impacts over time through continued maintenance of the mitigation areas. Monitoring and maintenance is described further below.

Compensating

To compensate for the new, permanent impacts to the buffer, buffer enhancement is proposed. The buffer enhancement area is 6,200 sq. ft., which is approximately equal to the area of new, permanent impacts.

Monitoring the impact

Monitoring is proposed for a period of 5 years following completion of the buffer enhancement plan, in accordance with BIMC 16.20.140.J.6. The project should be conditioned to require a minimum of 7 years of monitoring, consistent with BIMC 16.20.180.G.3.e.iv (Condition 12). (In the event of conflict between regulations, the more protect applies (BIMC 16.20.060.H.1)).

As conditioned, staff finds that this criterion is met.

4. The proposed impact to the critical area is the minimum necessary to allow reasonable use of the property;

Staff response: The development area is proposed as far away from the wetland edges as possible – any alternative development location on the site would encroach into the wetlands, due to their configuration on the site. The development is also located in a historically disturbed part of the buffer that does not contain any native vegetation and is maintained primarily as lawn. The proposal does not include any accessory patios or walkways, or new lawn areas. Impacts could be further minimized while still allowing reasonable use of the property by imposing conditions such as:

- Requiring that lights be directed away from the wetlands.
- Requiring that covenants be established to restrict the use of pesticides, herbicides, and fertilizers.
- Requiring that any temporary construction entrances be comprised of inert materials. Prohibit recycled concrete.
- Requiring fencing along the edge of the primary drainfield, as opposed the edge of the reserve.
- Prohibiting the use of soil sterilant on the driveway.

- Requiring that significant trees within the wetland buffer be retained to the extent possible.
- Requiring non-leaching roofing.

As conditioned, the proposed impact to the critical area is the minimum necessary to allow reasonable use of the property (Conditions 4 and 16).

(Note: Although a smaller residence and garage may result in less impact to the buffer, the underlying zoning supports the allowed lot coverage, which is limited to 1,200 square feet. The City has historically considered lot coverage of 1,200 square feet reasonable for a lot that is encumbered by critical areas, provided enough mitigation is proposed to adequately compensate for impacts. Therefore a discussion of a residence with reduced lot coverage is not required to be a part of an alternatives analysis.)

5. The inability of the applicant to derive reasonable use of the property is not the result of actions by the applicant, or of the applicant's predecessor, that occurred after February 20, 1992;

Staff response: The inability of the applicant to derive reasonable use of the property is not the result of actions by the applicant, or of the applicant's predecessor, that occurred after February 20, 1992. There does not appear to be record of any land use actions taken on the property since 1992. In 1994, the City has record of a preapplication conference to develop the property through a reasonable use exception (RUE), but an application for an RUE has not been received until now. This criterion is met.

6. The proposed total lot coverage does not exceed 1,200 square feet for residential development;

Staff response: Under BIMC 18.12.050, Rules of Measurement, lot coverage means that portion of the total lot area covered by buildings, excluding up to 24 inches of eaves on each side of the building, any building or portion of building located below predevelopment and finished grade. The proposed footprint of the structures is approximately 1,198 sq. ft. The proposal is conditioned to provide lot coverage calculations with the building permit application to ensure that this criterion is met. (Condition 7)

7. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the property;

Staff response: As conditioned, the proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the property.

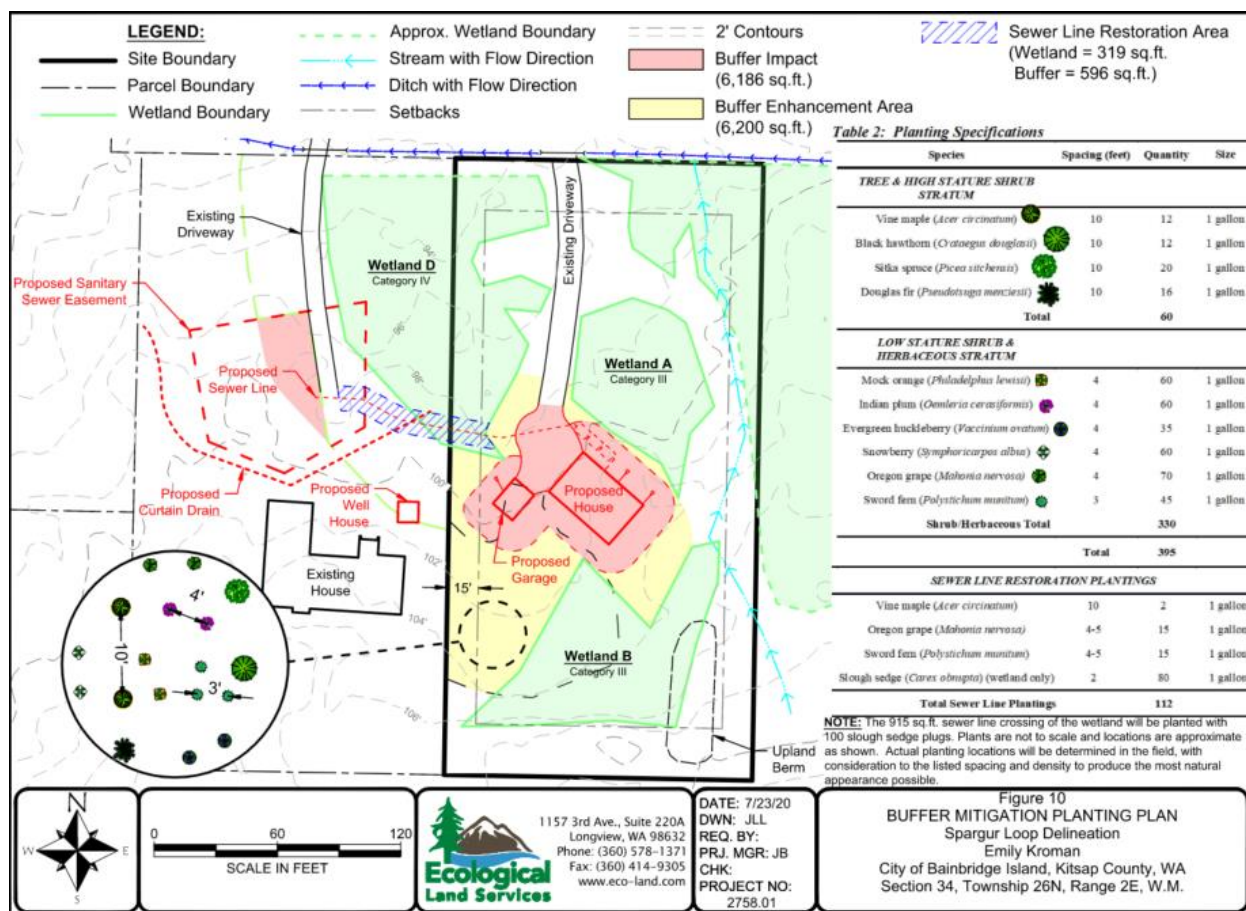
8. Any alterations permitted to the critical area are mitigated in accordance with mitigation requirements applicable to the critical area altered;

Staff response: Although there are no prescriptive mitigation requirements for wetland buffers, the mitigation plan is required to contain goals and objectives that are related to the functions and values of the original critical area, in accordance with BIMC 16.20.180.G.3.b. As described in the critical areas report, the existing wetland buffer "is composed of dense mowed grasses and herbaceous weeds that have some ability to improve water quality...It currently provides no habitat or wetland protection functions because it lacks woody vegetation cover."

The buffer enhancement plan contains goals and objectives related to improving water quality, wildlife habitat, and wetland protection. These and objectives are described within the “Buffer Mitigation Justification” section of the report. Staff finds that the goals and objectives are based on a qualitative analysis of the existing buffer functions. As such, this criterion is met. However, a final mitigation plan must be provided with the building permit application, in accordance with BMC 16.20.180.G.3.b. The final plan must address the revised septic line, as well as the final building area layout. The City must agree that the final mitigation plan will result in no net loss of critical area function and value prior to building permit issuance. (Condition 5)

Note: The septic drainfield is proposed on the adjacent lot, within the category IV wetland buffer that extends onto both parcels. Initially staff indicated to the applicant that a separate critical areas permit would be required to install the drainfield, since it is proposed on a separate property. However, because mitigation for impacts from the drainfield will be provided on the subject property and the drainfield is part of a development that requires an RUE, staff finds it acceptable to only require a single land use application for the entire scope of the proposal; nothing would be gained by requiring a second land use application for the drainfield. If the drainfield were proposed within a wetland buffer without an associated RUE, then a critical areas permit would be required.

Figure 4 – Mitigation proposal



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

Staff response: The City's Water Resources Technician, who holds a certificate of wetland science and management, reviewed the mitigation plan and found it to protect critical area function and values consistent with best available science, resulting in no net loss of critical area function and values. The enhanced buffer will provide additional water quality benefits, as well as new habitat and wetland protection on the site. This criterion is met.

10. The proposal addresses cumulative impacts of the action;

Staff response: Cumulative impacts are the combined environmental impacts that accrue over time and space from a series of similar or related individual actions, contaminants, or projects. The proposal addresses cumulative impacts by siting and designing the development to have a minimal impact on the critical area and mitigating for any permanent loss of buffer function. Future impacts are addressed by restricting pesticide use, taking measures to prevent future encroachment into the critical area by installing fencing along the buffer, monitoring the mitigation area to ensure its success, and maintaining the mitigation areas in perpetuity (Conditions 4, 9, 12, and 15). As conditioned, the project addresses cumulative impacts.

11. The proposal is consistent with other applicable regulations and standards.

Staff response: The proposal is consistent with other applicable regulations and standards of the BIMC. An analysis of these regulations and standards is provided throughout the staff report.

B. BIMC 16.20.100 Aquifer Recharge Protection Area (ARPA)

Aquifer recharge areas are areas that have a critical recharging effect on groundwater used for potable water supplies and/or that demonstrate a high level of susceptibility or vulnerability to groundwater contamination from land use activities. In accordance with WAC 365-190-100, the entirety of Bainbridge Island is classified as an aquifer recharge area to preserve the volume of recharge available to the aquifer system and to protect groundwater from contamination.

Staff response: Pursuant to BIMC 16.20.100.E.1.d, an ARPA is not required for development and activities located on properties protected in perpetuity by a legal instrument acceptable to the city attorney wherein at least 65 percent of the site meets the development standards for aquifer recharge protection areas of this section. More than 65% of the property is protected by the regulations governing wetlands. A notice to title documenting the presence of the restrictions associated with wetlands on the site is required. It is the City's policy to not require an ARPA in these situations.

C. BIMC 16.20.140 Wetlands

Wetland Buffers

Buffer widths are based on wetland category, scores for habitat functions on the rating form, and the intensity of the proposed land use. A 15-foot structure or hard surface setback is also required from the edge of any wetland buffer.

Staff response: There are three category III wetlands with 110' buffer and one category IV wetland with a 40' buffer onsite.

Fencing and Signs

Wetland buffers shall be temporarily fenced or otherwise suitably marked between the area where the construction activity occurs and the buffer. Fences shall be made of a durable protective barrier and shall be highly visible. Silt fences and plastic construction fences may be used to prevent encroachment on wetlands or their buffers by construction. Temporary fencing shall be removed after the site work has been completed and the site is fully stabilized per city approval.

Staff response: The project is conditioned to provide temporary fencing prior to commencing construction and to maintain the fencing until the work is complete and site is fully stabilized (Condition 16c).

The director may require that permanent signs and/or fencing be placed on the common boundary between a wetland buffer and the adjacent land. Such signs will identify the wetland buffer. The director may approve an alternate method of wetland and buffer identification, if it provides adequate protection to the wetland and buffer.

Staff response: Permanent fencing and signs are proposed by the applicant. Fencing shall be installed along the buffer edge adjacent to the development area. Fencing shall be indicated on building permit plans (Conditions 8 and 9). A minimum of 2 signs shall be placed on the fencing, indicating the presence of the protected wetland buffer. The Director may require additional signs depending on the final development area layout (Condition 10).

D. BIMC 16.20.160 Performance and Maintenance Surety

The director shall decide when a performance surety is required of an applicant, and the acceptable form of such surety. The amount and the conditions of the surety shall be consistent with the purposes of this chapter; provided, that the minimum amount of the surety, when required, shall be 125% of the estimated cost of performance. A performance surety shall not be required when the actual cost of performance, as documented in a form acceptable to the director, is less than \$1,000.

Staff response: All plantings that are a part of the mitigation plan shall be installed prior to final building permit inspection, or a performance surety shall be provided in accordance BIMC 16.20.160 (Condition 11). A maintenance surety shall be provided prior to final building permit inspection or upon release of the performance surety if plantings are not installed at the time of the final inspection, whichever is applicable (Condition 14).

E. BIMC 16.20.070.G Notice on Title

The owner of any property with field-verified presence of critical area or buffer on which a development proposal is submitted shall file for record with the Kitsap County auditor a notice approved by the director in a form substantially as set forth in Subsection 2 of BIMC 16.20.070.G.

Staff response: The applicant shall submit a recorded notice to title prior to the issuance of the building permits, documenting the presence of the critical areas onsite (Condition 15).

Part VIII – CONCLUSIONS

1. Site Characteristics

The property is completely encumbered by wetlands and associated buffers. The site is partially maintained as existing lawn, and also contains areas dominated by invasive species and forested wetland buffer.

2. History

Appropriate notice of the application was published. The application is properly before the Hearing Examiner.

3. Comprehensive Plan Analysis

The proposal is consistent with the goals and policies of the Comprehensive Plan, including those of the Environmental Element and Land Use Element.

4. Land Use Code Analysis

With appropriate conditions, the proposal conforms to all applicable regulations in the Bainbridge Island Municipal Code.

APPEAL PROCEDURES

Any decision of the Hearing Examiner may be appealed in accordance with BIMC Chapter 2.16.020.R.2.

Conditions:

1. Work shall be completed in substantial compliance with the design and specifications included in the RUE file, including:
 - a. Total lot coverage shall not exceed 1,200 sq. ft.
 - b. A parking garage (attached or unattached, depending on alternatives analysis)
 - c. A permanent impact area not to exceed 6,186 sq. ft.; depending on the results of condition #2
 - d. A buffer enhancement area of 6,200 sq. ft., or equivalent to the permanent impact area and depending on the results of condition #2
 - e. Development and permanent impacts located outside of all wetlands.
 - f. Implementation of the avoidance and minimization steps provided in the wetland mitigation plan.
2. To demonstrate that the proposal meets RUE decision criteria #2, there is no reasonable alternative to the proposal with less impact to the critical area or its required buffer, an analysis of reasonable alternatives to the proposed site layout shall be provided prior to building permit submittal. The analysis must consider reducing the overall impact area by attaching the garage and SFR, the use of low-impact foundation designs, and other measures that may reduce permanent impacts to the wetland buffer. Factors such as stormwater management and site topography may be taken into account and included in the analysis. The analysis shall be reviewed and approved by City staff prior to building permit issuance.
3. Minor changes to the site plan within the approved impact area may be authorized as a part of the building permit review, provided the square footages of structures and impacts in condition #1 do not increase. Minor changes that further reduce impacts to the critical area may be allowed, provided the wetland mitigation plan is updated and approved as a part of the building permit review.
4. To further minimize impacts to the wetland buffer and ensure there is no reasonable alternative to the proposal with less impact, the following shall be implemented:
 - a. The proposed well house must be located outside of the wetland buffer, to the extent feasible. The applicant must provide supporting documentation if an alternative location is deemed infeasible.
 - b. No pesticides, herbicides or fertilizers may be used in fish and wildlife conservation areas or their buffers except those approved by the U.S. Environmental Protection Agency (EPA) and Washington Department of Ecology and applied by a licensed applicator in accordance with the safe application practices on the label. This shall be stated on the site plan and recorded with the Notice to Title.
 - c. Lighting on the exterior of the residence shall be limited to the minimum necessary and shall be directed downward and away from the wetlands.
 - d. Access of machinery shall be restricted to as few areas as possible, to reduce soil compaction. These areas shall be indicated on the site plan.
 - e. Construction shall take place during the dry season (May through September) to reduce impacts to aquatic resources.

- f. Tall, dense evergreen vegetation shall be planted around the outside edge of the buffer to improve screening between development and the wetland.
 - g. The buffer enhancement area shall not be cleared or grubbed, except for the removal of invasive species. Downed woody debris shall be retained.
 - h. No refuse, including but not limited to household trash, yard waste (e.g. lawn clippings) and commercial/industrial refuse, shall be placed in the buffer.
 - i. Roofing shall be of a non-leaching material that is not harmful to the environment. Examples of non-leaching materials are metal and tile roofs. Any alternative method proposed requires approval by the City prior to final building permit issuance, and must address BIMC water quality standards, Chapter 13.24, to assure that wetland flora and fauna functions and values are maintained/enhanced.
 - j. To prevent inadvertent damage to significant trees, the site plan shall identify significant trees. Tree root protection fencing is required for any significant trees with roots in the immediate vicinity of the project area. Tree root protection fencing shall be marked on the final site plan and in place prior to the start of construction.
5. A final mitigation plan shall be provided with the building permit application, in accordance with BIMC 16.20.180.G.3.b. The final plan must address the revised septic line, as well as the final building area layout as a result of the alternatives analysis. The City must agree that the final mitigation plan will result in no net loss of critical function and value prior to building permit issuance, and may require 3rd party review of the final mitigation plan, the cost of which shall be borne by the applicant, should the Director deem necessary.
 6. A final planting plan shall be submitted with the building permit application, consistent with the results of the updated mitigation plan.
 7. Lot coverage calculations must be provided with the building permit application.
 8. A temporary five-foot-high chain link fence with tubular steel poles or "T" posts shall delineate the area of prohibited disturbance, which is the outer edge of the reduced wetland buffer surrounding the residence and drainfield, unless the director has approved the use of a four-foot-high plastic net fence as an alternative. The fence shall be indicated on the site plan. The fence shall be erected and inspected by city staff before clearing, grading and/or construction permits are issued and shall remain in place until construction has been completed, and shall at all times have affixed to it a sign indicating the protected area.
 9. Prior to final inspection of the building permit, the temporary fencing shall be replaced with the permanent split-rail fence along the perimeter of the buffer enhancement area.
 10. A minimum of two signs indicating the presence of a protected wetland buffer shall be placed on the split-rail fence, prior to final inspection of the building permit. Signs shall be made of metal or a similar durable material and shall be between 64 and 144 square inches in size. The Director may notify the applicant that additional signs area required, should deemed necessary as a result of the final building area layout.
 11. All plantings shall be installed prior to final building permit inspection, or a performance surety shall be provided in accordance BIMC 16.20.160.
 12. A monitoring report shall be submitted annually by December 31st each year, at a minimum, documenting milestones, successes, problems, and contingency actions of the mitigation plan. The

mitigation plan shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than seven years.

13. If the performance standards in the mitigation plan are not met, a contingency plan shall be submitted to the Department of Planning and Community Development for approval. Any additional permits or approvals necessary for contingency actions shall be obtained prior to implementing the contingency plan.
14. A maintenance surety shall be provided prior to final building permit inspection, or upon release of the performance surety if plantings are not installed at the time of the final inspection, whichever is applicable. The director shall release the maintenance surety upon determining that performance standards established for evaluating the effectiveness and success of the structures, improvements, and/or compensatory mitigation have been satisfactorily met for the required period.
15. The applicant shall record a notice to title to document the presence of the wetland buffers and mitigation areas with the Kitsap County auditor. Such notice shall provide notice in the public record of the presence of a critical areas, the application of BIMC Chapter 16.20 to the property, and that limitations on actions in or affecting such areas may exist. The notice must be recorded prior to the issuance of the building permit.
16. The applicant shall comply with the following conditions to the satisfaction of the City Engineer:
 - a. Existing access to the COBI ROW shall be improved to the standard paved residential driveway approach detail DWG. 8-170.
 - b. All underground utilities (well water, septic transport, power, etc.) shall be routed to minimize site disturbances to the maximum extent feasible.
 - c. Use of soil sterilant to construct the driveway shall be strictly prohibited.
 - d. Consideration shall be given to utilizing minimal excavation foundation systems per the 2012 Low Impact Development Guidance Manual for Puget Sound as means of minimizing impacts to the site and the adjacent critical areas. A bid comparison/analysis shall be submitted demonstrating the applicant has engaged an appropriate design and construction professional to explore alternative foundation systems including stilts, helical piers, and pin piles with grade beams. The bid shall be obtained from a designer or installer with previous experience building with this technology.
 - e. Areas outside the building footprint, driveway, septic components and field and any necessary construction setbacks shall be protected from soil stripping, stockpiling, and compaction by construction equipment through installation of resilient, high visibility clearing limits fencing or equivalent, subject to inspection by the City prior to clearing and construction.
 - f. Hardscaping should be constructed of permeable materials or contain wide permeable jointing where feasible to allow infiltration or shallow subsurface filtration of surface stormwater.
 - g. Surface stormwater from the proposed structures and from the developed driveway shall discharge and disperse at a location and in a manner consistent with BMP T5.10B – Downspout Dispersion Systems. Strong priority shall be given to diffuse flow methods (i.e. BMP C206: Level Spreader, pop-up emitters, diffuser tee or engineered equivalent to minimize point discharges of surface stormwater to the wetland buffer.



August 20, 2018

Emily Kroman
9185 NE Spargur Loop Rd.
Bainbridge Island, WA 98110

Dear Applicant:

Thank you for meeting with City staff on August 14, 2018 to discuss your proposal to construct a single family residence on a property encumbered by a wetland and wetland buffer. A summary of the land use review process, applicable Bainbridge Island Municipal Code (BIMC) regulations, comments from reviewers, fees, submittal requirements, and next steps is provided below.

General Information
Pre-Application Conference Date: August 14, 2018
Project Name and Number: Kroman/Huguet PRE - PLN51228
Project Description: Construct SFR on lot encumbered by wetlands and wetland buffers
Project Address: 9185 Spargur Loop Rd.
Tax Parcel Number(s): 34260240332007
Tax Parcel Size: 1.03 acres
Zoning/Comp Plan Designation: R-0.4
Planning Contact: Annie Hillier
Development Engineer: Paul Nylund

Land Use Review Process
Land Use Applications Required
<p>Reasonable Use Exception: BIMC 16.20.080 – A reasonable use exception (RUE) is intended to ensure reasonable use of a property when reasonable use of that property cannot be achieved through any other means. Given the extent of the wetlands and buffers, and the inability to achieve reasonable use of the property through other means, an RUE appears to be the only way to develop the property as proposed. Criteria for review and approval under BIMC 16.20.080.F must be addressed in the application materials, which includes a maximum total lot coverage of 1,200 square feet, and a mitigation plan developed in accordance with BIMC 16.20.180.G.</p> <ul style="list-style-type: none"> • Include in RUE application: A complete and detailed written statement of the reason(s) for requesting the RUE and how the proposal will meet the decision criteria (11) for review and approval under BIMC 16.20.080.F. Please pay particular attention to the following criteria:

- The proposal minimizes the impact on critical areas in accordance with *mitigation sequencing* (BIMC [16.20.030](#));
- The proposed impact to the critical area is the *minimum necessary* to allow reasonable use of the property; and
- The proposal addresses *cumulative impacts* of the action.

See the [Administrative Manual](#) for additional submittal requirements.

Fees

Planning Fees:

\$3,816

Approval Body

Quasi-judicial decision by Hearing Examiner (BIMC Table 2.16.010).

City staff will send a tentative hearing date to the applicant prior to the Notice of Application and SEPA comment period.

Review and Recommendation

BIMC 2.16.100:

Director (review and recommendation)

Planning Commission (optional)

Public Hearing (report presented to hearing examiner)

Other required reviews:

Bainbridge Island Fire Department review

Planning Division review

Development Engineer review

Summary of Application Materials

Basic site plan

Wetland [critical areas report and mitigation plan](#)

- Mitigation plot plans based on surveyed wetland boundaries

Project narrative

[SEPA checklist](#)

Any terms, conditions, covenants, and agreements under which the subject property may be bound

Bainbridge Island Municipal Code Requirements – Planning Checklist

BIMC 2.16 – Land Use Review Procedures

Review procedures for a Reasonable Use Exception are outlined in BIMC 2.16.100 and BIMC 16.20.080.

BIMC 16.04 – Environmental Policy

The project is subject to the State Environmental Policy Act, as provided in WAC 197-11-800. Provide a completed [SEPA checklist](#) with application materials.

BIMC 16.12 – Shoreline Master Program

The subject property is outside of shoreline jurisdiction.

BIMC 16.20 – Critical Areas

BIMC 16.20.040

During the conference, the applicant inquired about installing fencing along property lines. Note that the following is exempt (i.e. allowed) from the requirements of the critical areas ordinance: *The installation of low impact fencing within critical area buffers provided the location does not result in restricting wildlife movement, the location and installation is the least impactful to the critical area and buffer as possible, and there is no alternative to fencing to achieve the purpose of the fence.*

BIMC 16.20.140 Wetlands

It appears that the site is encumbered by several wetland systems and their buffers. **A wetland delineation and rating is required (critical areas report)**, developed in accordance with BIMC 16.20.180.F. Note that no activity or use shall be allowed that results in a net loss of the functions or values of critical areas.

The wetland boundary shall be marked in the field and surveyed by a licensed surveyor. The mitigation plan must include plot plans that contain **a legal description and a survey (boundary and topography) prepared by a licensed surveyor** of the proposed development site, compensation site, and location of existing critical area(s) on each.

Wetland Mitigation Requirements (BIMC 16.20.140.J)

All development, uses and activities proposed to impact wetlands shall be mitigated according to this section and the mitigation sequencing steps outlined in BIMC 16.20.030. The applicant shall demonstrate to the satisfaction of the director that each step of mitigation sequencing has been adequately addressed prior to approval of impacts to wetlands.

During the mitigation sequencing process, the applicant shall consider steps to minimize impacts to the wetland/buffer, including:

- Fencing between the SFR and wetland buffer, and other efforts to prevent future encroachment;
- Plants between SFR and wetland should be chosen based on ability to provide light and noise screening, i.e. densely planted trees/high stature shrubs;
- Using elevated walkways around the SFR, rather than at-grade;
- Direct lights away from wetland;
- Low-impact foundation designs.

See Table 7 under BIMC 16.20.140.I for other examples of measures to minimize impacts.

Any impacts that cannot be avoided or eliminated require compensatory mitigation. It is likely that this project will result in impacts the wetlands/buffers onsite, and therefore a **mitigation plan** (BIMC 16.20.180.G), which may be created as a component of the critical areas report, is required. Replacement ratios for wetland impacts are outlined in Table 8, under BIMC 16.20.140.J. No activity or use shall be allowed that results in a net loss of the functions or values of critical areas, including buffers.

Please note that sewage facilities are prohibited in all wetlands. The septic system may be permitted in a wetland buffer only when the applicant demonstrates it is necessary to meet state and/or local health code minimum design standards (not requiring a variance for either horizontal setback or vertical separation); and/or there are no other practicable or reasonable alternatives available and construction meets all other applicable requirements of this section.

During the conference, we also discussed the possibility of altering the septic system on the adjacent lot. Provided this activity complies with the critical areas ordinance and/or any necessary permits are obtained, City staff supports this option, as impacts to the wetlands and buffers onsite would be further minimized.

RUE approval will require review and approval by the Kitsap Public Health District.

BIMC 16.20.100 Aquifer Recharge Protection Areas

Refer to BIMC 16.20.100 for Aquifer Recharge Protection Area requirements. For this project, the ARPA shall include all existing native vegetation on a site, up to a maximum of 65 percent of the total site area. The ARPA may include the wetlands and wetland buffers. Please show the proposed ARPA on the site plan submitted with RUE application materials. Note that the ARPA shall be documented on a notice to title prior to building permit issuance; this will be a condition of the RUE approval.

BIMC 18.09 – Use Regulations

Development of single family residences is a permitted use under BIMC 18.09.020.

BIMC 18.12 – Dimensional Standards

Lot Coverage: 10%*

Front Yard Setback: 25 ft.

Side Setbacks: 15 ft.

Rear Yard Setback: 25 ft.

Max Building Height: 30 ft.

***Lot coverage is limited to 1,200 square feet for RUE's.** Lot coverage is defined as: that portion of the total lot area covered by buildings, excluding up to 24 inches of eaves on each side of the building, any building or portion of building located below predevelopment and finished grade. Any portion of a slatted or solid deck located more than five feet above grade shall be counted towards lot coverage.



BIMC 18.15 – Development Standards and Guidelines
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Development shall comply with the parking standards as set forth in BIMC 18.15.020, which requires two spaces for each primary dwelling unit.
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BIMC 20.04 – City Fire Code

The project shall comply with all applicable provisions of the adopted Fire Code (International Fire Code, 2015 Edition).

Department/Agency Comments

Development Engineer Comment:

Comments from Development Engineering are forthcoming, and will be sent in a separate email as soon as possible.
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Bainbridge Island Fire District Comment:

Please see the attached comments, from Jared Moravec, Fire Marshal.

Please review the City's Administrative Manual (<http://www.ci.bainbridge-island.wa.us/DocumentCenter/View/100>) **for submittal requirements.** Once you are ready to submit an application, contact Planning and Community Development at PCD@bainbridgewa.gov to schedule an intake appointment. If you have any questions, please contact me at (206) 780-3773 or ahillier@bainbridgewa.gov. All fees are due at the time of submittal.

Sincerely,

A handwritten signature in black ink, appearing to read 'Annie Hillier', is written over a horizontal line.

Annie Hillier
Planner

Please note that information provided at the pre-application conference and in this letter reflects existing codes and standards, currently available information about the site and environs, and the level of detail provided in the pre-application conference submittal. Comments provided pursuant to pre-application review shall not be construed to relieve the applicant of conformance with all applicable fees, codes, policies, and standards in effect at the time of complete land use permit application. The comments on this proposal do not represent or guarantee approval of any project or permit. While we have attempted to cover as many of the Planning, Engineering, Building and Fire related aspects of your proposal as possible during this preliminary review, subsequent review of your land use permit application may reveal issues not identified during the initial review. If the city's pre-application review indicates that the City intends to recommend or impose one or more conditions of permit approval, and if the applicant objects to any of said conditions, the applicant is hereby requested and advised to



provide written notice to the City of which conditions the applicant objects to and the reasons for the applicant's objections.



MEMO

Date: August 14, 2018
To: Planning Department
From: Deputy Chief Jared Moravec, Fire Marshal
Re: Kroman/Huguet

PLN51228PRE

The submittal has been reviewed resulting in the following comments:

1. The proposed project shall comply with all provisions of the adopted Fire Code including the following as applicable:
2. Fire flow is achieved through existing hydrants.
3. Access driveway shall meet Fire Department standards. See attached document.



RESIDENTIAL DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUNDS

2012 International Fire Code
D103.4 — Requirements for
Dead-End Fire Apparatus Access Roads

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches, unless otherwise approved by the fire marshal of the Bainbridge Island Fire Department. **EXCEPTIONS:**

503.2.2 Authority. The fire code official shall have the authority to require an increase in the minimum access widths where they are inadequate for fire or rescue operations.

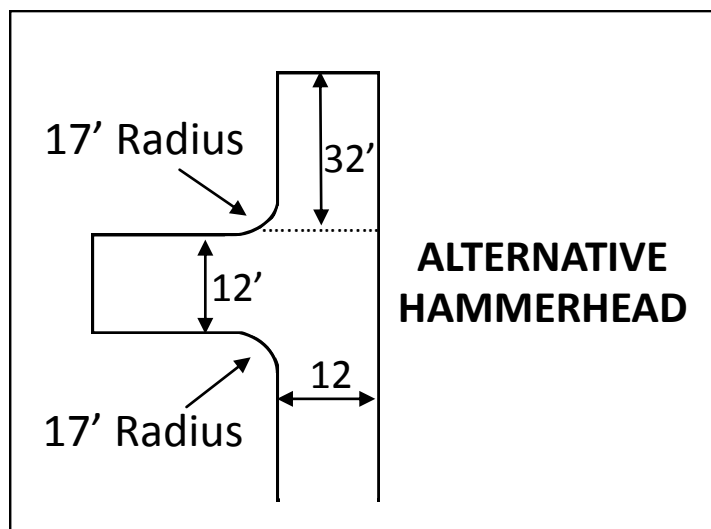
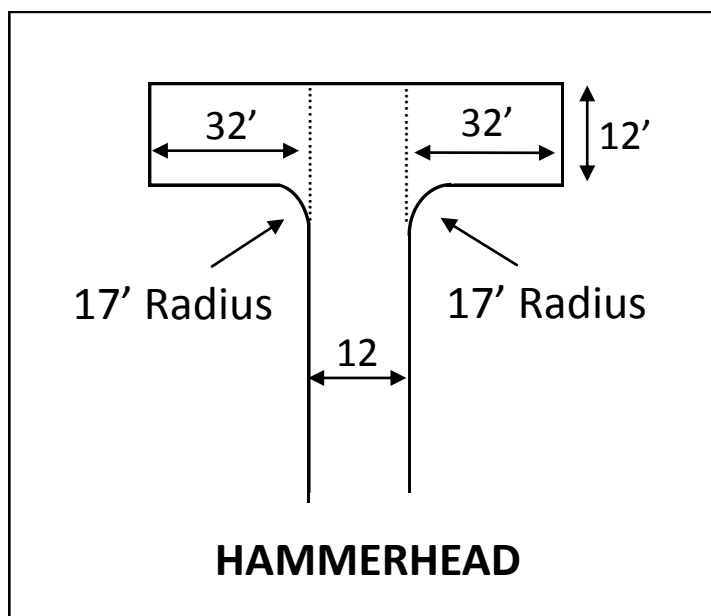
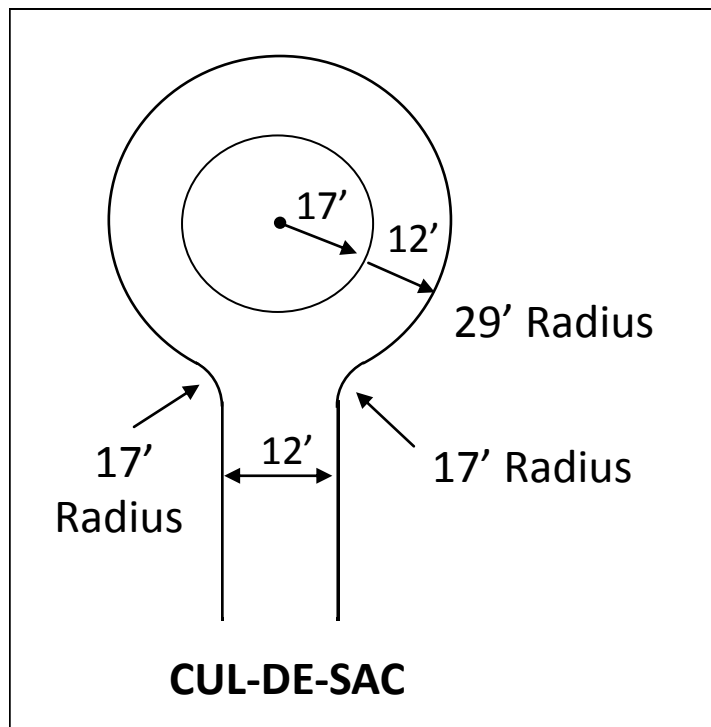
503.2.4 Turning radius. The required turning radius of a fire apparatus access road shall be determined by the fire code official.

503.2.5 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus.

503.2.7.2 Private Fire Apparatus Access Roadways. The grade of existing private fire apparatus access roads shall not exceed 12%.

503.2.8 Angles of Approach and Departure. The angles of approach and departure for fire apparatus access roads shall be within the limits established by the fire code official based on the department's apparatus.

503.4 Obstruction of fire apparatus access roads. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503.2.1 shall be maintained at all times.



SITE ASSESSMENT REVIEW: COMPLETE

Date: August 29, 2018

SmartGov Case No.: SAR80145

Owner: Emily Kroman & Justin Huguet

Mailing Address: 9185 Spargur Loop Rd | Bainbridge Island, WA 98110

Applicant/Agent:

Project: Kroman-Huguet SFR

Site Location: 9185 Spargur Loop Rd | Bainbridge Island, WA 98110

Tax Identification No.: 34260240332007

This completed Site Assessment Review (SAR) letter serves as an endorsement from the Department of Public Works of the project with recommendations to achieve Low Impact Development (LID) to the maximum extent practicable based on the Department of Ecology's Storm Water Management Manual for Western Washington (SWMMWW). The following LID recommendations apply to the site as it has been presented in the application to reduce vegetation removal, minimize hard surface installation, and mimic natural hydrology. This assessment is non-binding, unless the recommendations are as required under BIMC 15.20. Application for permits with the City of Bainbridge Island for which a SAR is required shall be in substantial conformance with this proposal, or, else a new SAR shall be required.

Project Surfaces/Thresholds:

Threshold	Proposed Project
Proposed New/Replaced Hard Surface Total	~2500 sf
Proposed Land Clearing/Disturbance	~3000 sf
Existing Site Impervious Coverage	~0
Total Site Area	~44000 sf
Site Previously Developed Under Adopted Stormwater Regulations (after 2/10/1999)	NO
Type of Development (New or Redevelopment)	Redevelopment

General Recommendations:

- This project proposes to construct a new single family residence (SFR), driveway, and associated on-site septic drain field totaling approximately 2500 sf of new and replaced hard surfaces on a currently undeveloped ~44000 sf lot located on the south side of Spargur Loop Road, west of the Phelps/N. Madison Ave intersection (Frog Rock). Initial review indicates multiple wetlands exist on the property and the applicant is in the process of acquiring a reasonable use exception (RUE) from COBI Planning and Community Development (PCD) due to the wetlands. These critical areas will strongly influence low impact development decisions for the project. Assuming that an RUE is granted, the proposed work shall be completed with a building permit issued by COBI PCD.
- An application for Building permit will require the project demonstrate compliance with applicable minimum requirements (MRs) # 1 through 5 of the City's adopted stormwater manual.
 - MR#1 – Develop a Permanent Stormwater Site Plan (SSP).
 - MR#2 – Develop a Construction Erosion Control Plan: Also known as Stormwater Pollution Prevention Plan (SWPPP).
 - MR#3 – Source Control of Pollution – Generally N/A for projects of this scope (residential).
 - MR#4 – Preservation of Natural Drainage Systems and Outfalls
 - MR#5 – On-Site Stormwater Treatment
- *Develop a Permanent Stormwater Site Plan (MR #1):* The SSP is the comprehensive report containing all the technical information and analysis necessary for the City to evaluate a proposed development project for compliance with stormwater requirements. Contents of the SSP will vary with the type and size of the project,

and individual site characteristics, and contain site-appropriate development principles, as required, to retain native vegetation and minimize impervious surfaces to the extent feasible.

- Project is less than 5,000sf of new/replaced hard surface so this plan is required but does not have to be created by (or under the direction of) a professional engineer licensed to practice in Washington State. The SWMMWW volume I, section I-3.1.5, Step 5 offers additional guidance on content and format of the plan and narrative to assist the applicant in preparation and submittal for review by COBI Development engineering staff.
- Compliance with MR#2 *Develop a Construction Erosion Control Plan* requires submittal and approval of a Stormwater Pollution Prevention Plan (SWPPP), also called an Erosion Control Plan. The SWPPP applies to all land-disturbing activities and temporary impacts associated with the project. A well followed SWPPP with established clearing and disturbance limits and clearly thought out phasing helps to minimize unnecessary destruction of healthy soils during the construction process.
 - Applicant should complete COBI form B109D (available online) and annotate the location of intended erosion control elements on the stormwater site plan drawing and maintain that with the building permit when issued by COBI Planning and Community Development. Please refer to the SWMMWW, Vol I, section I-2.5.2 for additional explanation of the 13 elements that a SWPPP is required to consider and address.
 - Erosion control devices shall be installed to prevent sedimentation of any existing drainage system and to retain stormwater pollutants on-site that are generated from site preparation operations.
 - Temporary construction entrances and access roads shall be constructed of inert materials. Recycled concrete is strictly prohibited.
- The SSP and SWPPP (including narrative and drawings) shall accompany the Building permit submittal for acceptance by COBI PCD.
- All soils disturbed and compacted during construction/clearing must be amended to restore soil health to 'GOOD' hydrologic conditions by tilling in compost or stripped and stockpiled topsoil where soils allow (BMP T5.13).
- MR#3 *Source Control of Pollution* – Generally N/A for projects of this scope (residential).
- MR#4 *Preserve all existing and natural drainage channels*. Some applicable impacts from this project are anticipated to existing and natural drainage channels given the wetlands and groundwater on site. Overflow stormwater and any other excess surface water not adequately treated on-site via the BMP's in MR #5 must still be safely discharged through the site in a manner that has no adverse impacts to downstream properties. In accordance with this requirement, where no natural channel is defined moderate shaping and grading to any existing drainage swale may be accomplished if existing drainage patterns are maintained.
- MR#5 – *On-Site Stormwater Management*. Project shall employ on site BMP's to infiltrate, disperse, and retain stormwater runoff on-site to a feasible extent without causing flooding or erosion impacts. Use list #1 (SWMMWW Vol I, I-2.5.5) for each runoff generating surface (Lawn, Roofs or Other Hard Surfaces) and select the first BMP that is considered feasible.
 - Selection rationale and Infeasibility criteria per the SWMMWW shall be documented in the SSP overview, especially when a BMP is deemed infeasible and the next lowest priority BMP is considered. Use COBI Form B109b to document infeasibilities and include it as part of the SSP when submitting for review.
 - If multiple BMP's are utilized, the permanent stormwater plan should clearly indicate which contributing areas are being mitigated by each system. System sizing criteria and rationale for any selected BMPs should also be included in the site plan per MR#1.
 - Site soils and areas that support infiltration (shown not to meet the infeasibility criteria of the stormwater manual) would require full-downspout infiltration or a rain garden sized per the Rain Garden Handbook for Western Washington meeting the 'GOOD' performance standard.
 - Surface stormwater from driveway and parking surfaces shall receive pre-treatment prior to discharging to the wetlands or leaving the site by directing stormwater to vegetated dispersion strips, rain gardens where soils allow, or the use of permeable pavement (outside of the ROW only), or other alternatives demonstrated to be consistent with MR #5, On-Site Stormwater Management of the SWMMWW.

Other Low Impact Development design considerations

- Placement of any rain garden, infiltration system and/or downspout dispersion systems shall comply with the [Kitsap County Health Ordinance 2008A-01](#) for setbacks from wells, primary septic fields and reserve areas, and septic system components. (see Table 1B of the ordinance). It's highly recommended you Include any proposed stormwater measures with the septic BSA to avoid future permitting conflicts.
- Retaining or planting trees within 20 feet of hard surfaces is recommended to reduce peak stormwater runoff amounts.
- Consider the placement and alignment of the new driveway to minimize clearing of significant trees, and optimize possibilities for dispersing stormwater overland;
- Consider utilizing minimal excavation foundation systems per the 2012 Low Impact Development Guidance Manual for Puget Sound as means of minimizing impacts to the wetland on site. Appropriate design and construction professionals with previous experience building with this technology should be consulted for analysis and comparison to traditional foundation systems.
- Hardscaping should be constructed of permeable materials or contain wide permeable jointing where feasible to allow infiltration or shallow subsurface filtration of surface stormwater.

ARPA

- Any proposed development or activity requiring a site assessment review (SAR), located within the R-0.4, R-1 or R-2 zoning designation, requires designation of an Aquifer Recharge Protection Area (unless exempt under BIMC 16.20.100.E.1(a-d)). Your property requires designation of an ARPA through the site plans submitted with your building permit and any land use permit that may be required. The proposed ARPA shall meet the general requirements and design standards under BIMC 16.20.100.D and E. As you prepare your permit application materials, please consider the following:
 - The ARPA shall include all existing native vegetation on a site, up to a maximum of 65 percent of the total site area. A lower percentage is allowed if necessary to achieve a development area of at least 12,500 square feet on a parcel (applies only to parcels ~19000sf or smaller);
 - The ARPA should retain healthy, existing trees and vegetation to the maximum extent possible. Healthy significant trees shall be priority trees for retention. Trees shall be retained in one or more stands or clusters;
 - The ARPA shall be delineated to include:
 - A low perimeter-to-area ratio
 - A minimum width of 12 feet
 - The critical root zone of all significant trees
 - The location and configuration of the ARPA may change over time, pursuant to criteria under BIMC 16.20.100.E.2.d.;
 - The ARPA shall be contiguous with abutting, off-site areas of other ARPAs, open space or critical areas to the extent feasible; and
 - The ARPA may include landscaping or open space requirements pursuant to BIMC 18.15.010.D and E and BIMC 17.12, respectively, and other critical areas and their buffers or setbacks pursuant to other sections of chapter 16.20, Critical Areas.

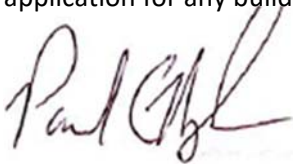
Landmark Trees

- On June 26, 2018, the COBI City Council adopted a Landmark Tree Preservation Ordinance (2018-25), amended on 14 August, that will protect certain trees that, because of their age, size, and condition, are recognized as having exceptional value in contributing to the character of the community. Under this new regulation, a Landmark Tree cannot be removed without approval from the City Council, and violators will be subject to civil penalties, including a \$25,000 penalty. The City Council adopted this ordinance on an emergency basis, which means it is effective immediately (i.e., effective as of 26 June 2018). Anyone who wishes to remove a Landmark Tree must apply for Removal of a Landmark Tree to the Planning Director who will render a decision on the application.

- Given the penalties included with this new regulation, the City recommends that if a property owner is considering removing a tree that could potentially be a Landmark Tree, such owners should consult with a certified arborist to determine if the tree(s) at issue meet(s) the definition of a Landmark Tree before taking further action.
- Initial analysis indicates that it's possible there are landmark trees that would need removal in order to construct the project as proposed.
- It is COBI policy that the surfacing material for driveways abutting a public roadway shall match the material of the roadway (asphalt in this case) from the existing edge of pavement to the back of the right of way. An asphalt paved road approach shall be per COBI Design and Construction Standards and Specifications (DCSS) from edge of existing pavement on Spargur Loop Road to back of right of way/property line (see COBI standard drawing 8-170).
 - The driveway/road approach will be assumed to require a driveway culvert (COBI drawing 8-175R,) unless it can be demonstrated to the city engineer that the absence of a culvert does not alter existing roadside drainage patterns and there is no risk of flooding damage to existing roadway prism or adjacent properties during the design storm event.

Summary

These recommendations are not fully inclusive of all requirements for the site proposal and do not constitute an approval, permit or a planning level/Reasonable Use Exception review. They represent a site-specific analysis and review of low impact development principles based on the project proposal and define some of the civil site design and documentation requirements going forward in the permitting process for this project. These comments also serve as Development Engineering comments out of the Pre-Application process. Please don't hesitate to contact COBI Development Engineering with any questions or concerns. This letter will be required as a submittal with the follow-on application for any building or land use (clearing) permit associated with the single-family residence project on this site.



Paul Nylund, M.S., E.I.T.
Development Engineer
Public Works, Engineering



**CITY OF BAINBRIDGE ISLAND
MASTER LAND USE APPLICATION**
P100

FOR OFFICIAL USE ONLY

City of Bainbridge Island

NOV 27 2019

Planning and
Community Development

PROJECT # S1228 RUE

PLANNER _____

Project Name: HUGUET-FROMAN RUE

Parcel Number(s): 342 60240332007

Property Address: 9185 SPARGUR LOOP ROAD (EAST PARCEL)

Type of Application (check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Adjustments to an Approved Land Use: | <input type="checkbox"/> Shoreline Clearing Permit |
| <input type="checkbox"/> Major <input type="checkbox"/> Minor | <input type="checkbox"/> Shoreline Conditional Use |
| <input type="checkbox"/> Administrative Code Interpretation | <input type="checkbox"/> Shoreline Exemption |
| <input type="checkbox"/> Agricultural Conditional Use | <input type="checkbox"/> Shoreline Substantial Development |
| <input type="checkbox"/> Agricultural Retail Plan | <input type="checkbox"/> Shoreline Variance |
| <input type="checkbox"/> Boundary Line Adjustment | <input type="checkbox"/> Sign Permit |
| <input type="checkbox"/> Buffer Enhancement Plan | <input type="checkbox"/> Site Plan and Design Review: |
| <input type="checkbox"/> Buoy Application | <input type="checkbox"/> Major <input type="checkbox"/> Minor |
| <input type="checkbox"/> Conditional Use Permit: | <input type="checkbox"/> State Environmental Policy Act (SEPA) |
| <input type="checkbox"/> Major <input type="checkbox"/> Minor | <input type="checkbox"/> Subdivision - Large <input type="checkbox"/> Preliminary |
| <input type="checkbox"/> Critical Area Permit: | <input type="checkbox"/> Subdivision - Long <input type="checkbox"/> Final |
| <input type="checkbox"/> Major <input type="checkbox"/> Minor | <input type="checkbox"/> Subdivision - Short <input type="checkbox"/> ALT/ADJ/AMEND |
| <input type="checkbox"/> Housing Design Demonstration Project | <input type="checkbox"/> Tree Removal & Vegetation Management |
| <input type="checkbox"/> Legislative Review of Development Regulations | <input type="checkbox"/> Variance: |
| <input type="checkbox"/> Pre-Application Conference | <input type="checkbox"/> Major <input type="checkbox"/> Minor |
| <input checked="" type="checkbox"/> Reasonable Use Exception | <input type="checkbox"/> Zoning Verification Letter |
| <input type="checkbox"/> Revision: Type _____ | <input type="checkbox"/> Wireless: |
| <input type="checkbox"/> Rezone: | <input type="checkbox"/> EFM <input type="checkbox"/> WCF |
| <input type="checkbox"/> Site Specific <input type="checkbox"/> Area-Wide | <input type="checkbox"/> Other _____ |

Project Description:

BUILD 1200 SQ. FOOT RESIDENTIAL PROJECT (SINGLE FAMILY HOME + GARAGE) IN WETLAND BUFFER.

Parcel #	Address	Property Owner

Project Contacts (owner, surveyor, engineer, etc)		
Property Owner: JUSTIN HUGGET + EMILY KRUMAN		
Address: 9185 SPARGUR LOOP ROAD, BAINBRIDGE ISLAND WA		
City:	State:	Zip: 98110
Email: EMILYKRUMAN@GMAIL.COM / JBHUGGET@GMAIL.COM		Phone:
Name: JBHUGGET@GMAIL.COM		Agency:
Address:		Function:
City:	State:	Zip:
Email:		Phone:
Name:		Agency:
Address:		Function:
City:	State:	Zip:
Email:		Phone:
Name:		Agency:
Address:		Function:
City:	State:	Zip:
Email:		Phone:

Authorized Agent (Please attach notarized Owner/Applicant Agreement Form)		
Name:		Agency:
Address:		
City:	State:	Zip:
Email:		Phone:

If additional parcels or contacts are required, please attach additional sheets

Applications ***must be submitted in person, and by appointment only*** by either the owner or the owner's designated agent. Applications to remove trees and vegetation, ***do not*** require an appointment and may be submitted electronically to pcd@bainbridgewa.gov. Should an agent submit an application, a ***notarized Owner/Applicant Agreement*** must accompany the application.

To schedule an appointment:

<https://www.bainbridgewa.gov/1110/Planning-and-Building-Submittal-Appointm>

Supporting information and/or documents may be required to review your application. If you have questions about specific requirements for your project, please consult with planning staff prior to submitting your application. **Submittal requirements for each application are described in the [Administrative Manual](#) for Planning Permits.**

**ELECTRONIC FILES AND TWO (2) PAPER COPIES ARE REQUIRED
FOR ALL SUBMITTED DOCUMENTS**

I affirm, under penalty of perjury, that all answers, statements, and information submitted with this application are correct and accurate to the best of my knowledge. I also affirm that I am the owner or designated agent of the subject site. Further, I grant permission to any and all employees and representatives of the City of Bainbridge Island and other governmental agencies to enter upon and inspect said property as reasonably necessary to process this application.

EMILY KROMAN

Print Name (Owner)



Signature (Owner)

11/27/19

Date

JUSTIN HUGUET

Print Name (Owner)



Signature (Owner)

11/27/19

Date

Print Name (Owner)

Signature (Owner)

Date

Print Name (Owner)

Signature (Owner)

Date

Print Name (Agent)

Signature (Agent)

Date

**** INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED OR WILL DELAY PROCESSING. ****



City of Bainbridge Island

Department of Planning & Community Development

280 Madison Avenue North, Bainbridge Island, WA 98110

Phone: 206-842-2552 Email: pcd@bainbridgewa.gov

Website: www.bainbridgewa.gov

Portal: <https://ci-bainbridgeisland-wa.smartgovcommunity.com/portal>

NOTICE OF INCOMPLETE APPLICATION

Huguet-Kroman RUE

OWNER: JUSTIN B & KROMAN EMILY E

HUGUET

9185 NE SPARGUR LOOP RD

BAINBRIDGE ISLAND, WA 98110

APPLICATION

RECEIVED:

November 27, 2019

PERMIT NUMBER:

PLN51228 RUE

PROJECT MANAGER:

Annie Hillier, (206) 780-3773, ahillier@bainbridgewa.gov

PROJECT DESCRIPTION: Construct 1198 sf SFR and GAR within wetland buffer.

PROJECT LOCATION:

NE Spargur Loop Rd. Bainbridge Island, WA 98110

DATE DETERMINATION MAILED:

December 23, 2019

TO COMPLETE THIS APPLICATION, THE FOLLOWING DOCUMENTS MUST BE SUBMITTED:

- **Survey**, in accordance with BIMC 16.20.140.B.3. The wetland boundary shall be marked in the field and surveyed by a licensed surveyor. The surveyed wetlands shall be sized and mapped on a scaled site plan. The mitigation plan, including compensation sites and proposed development shall also be depicted on a site plan that depicts surveyed wetland boundaries.
- Please consider the following revisions to the wetland report and mitigation plan:
 - Wetland D is indicated as Cat IV on the rating form and other tables but shown as Cat III on the figures. Please update the figures.
 - Please check the plant species on page 14 with those listed in Table 2; there appear to be discrepancies in species. Please revise, as appropriate.
 - Please include the 15' building setback area, surrounding the development, in the total buffer impact area, as this area will not be converted for buffer enhancement and will continue to experience impacts over the lifetime of the building. Please update buffer impact references in the report and figures, as appropriate.

Please note: Please submit the information requested within 60 days. Failure to do so will result in cancelation of the application in accordance with the following provision:

BIMC 2.16.020.J.3 Voiding the application due to inactivity. A land use application, whether determined to be complete or incomplete, for which approval has not been granted, may be canceled for inactivity if an applicant fails to respond to the department's written request for revisions, corrections, or additional information within 60 days of the request. The planning director may extend the response period beyond 60 days if within that time period the applicant provides and subsequently adheres to an approved schedule within specific target dates for submitting the full revisions, corrections, or other information needed by the requesting department. (ORD 2004-12 § 1, 2004)

Please do not hesitate to contact me if you have any further questions.

Sincerely,

Annie Hillier
Planner


City of Bainbridge Island

Department of Planning & Community Development

280 Madison Avenue North, Bainbridge Island, WA 98110

 Phone: 206-842-2552 Email: pcd@bainbridgewa.gov

 Website: www.bainbridgewa.gov

 Portal: <https://ci-bainbridgeisland-wa.smartgovcommunity.com/portal>

NOTICE OF COMPLETE APPLICATION

March 18, 2020

Re: Reasonable Use Exception (RUE)
 File Name: **Huguet-Kroman RUE**
 Project Number: **PLN51228 RUE**
 Submitted: November 27, 2019

The application for the above referenced project is complete in accordance with the submittal requirements located in the Bainbridge Island Administrative Manual. A determination of a complete application does not preclude the department from requesting additional information or studies.

Pursuant to *Bainbridge Island Municipal Code* Section 2.16.020(K), the applicant must post a legal notice of application on the property within five days of the publication of notice. The city will provide the notice boards and posting instructions, you must provide the stake/post. The City will contact you when the notice boards are prepared.

Correspondence concerning this application should make reference to both the file number and file name shown above.

Thank you,

Annie Hillier
 Project Manager



PLANNING & COMMUNITY DEVELOPMENT
 280 MADISON AVENUE NORTH | BAINBRIDGE ISLAND, WA 98110
 206.780.3750 | PCD@BAINBRIDGEWA.GOV | WWW.BAINBRIDGEWA.GOV

NOTICE OF APPLICATION/HEARING

The City of Bainbridge Island has received a Master Land Use Permit Application for the following project. The public has the right to review contents of the official file, provide written comments, participate in any public meetings or hearings, and request a copy of the decision. This notice is posted at the project site, in City Hall kiosks, the City of Bainbridge Island website, mailed to property owners within 500 feet of any boundary of the subject property and including any property within 500 feet of any contiguous property in the applicant's ownership and published in the Bainbridge Island Review.

PROJECT DESCRIPTION: Construct a single-family residence and garage within wetland buffer.

PROJECT NAME: Huguet-Kroman RUE

PROJECT NUMBER: PLN51228 RUE

PERMIT TYPE: Reasonable Use Exception

TAX PARCEL: 34260240332007

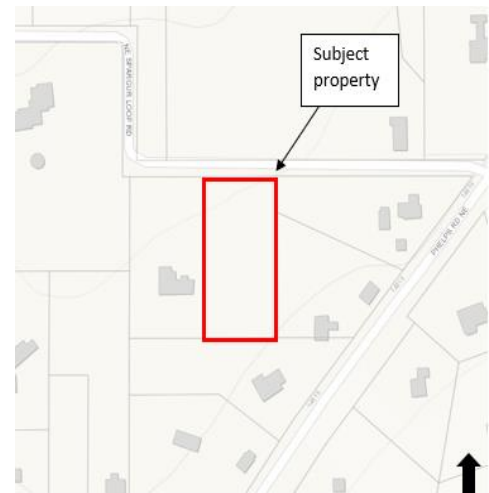
PROJECT SITE: NE Spargur Loop Rd

DATE SUBMITTED: November 27, 2019

DATE COMPLETE: March 18, 2020

DATE NOTICED: March 27, 2020

COMMENT PERIOD: March 27, 2020 – April 17, 2020



Comments must be submitted no later than 4:00pm on Friday, April 17, 2020.

Public comments may be mailed, emailed or personally delivered to the City using the staff name and contact information provided on this notice. The public comment period for this application is 21 days and the City will not act on the application until the comment period has ended. Any person may comment on the proposed application, request notice of and participate in the public hearing and request a copy of the decision. Only those persons who submit written comments prior to the decision or participate in the public hearing will be parties of record and only parties of record will have the right to appeal.

STAFF CONTACT: **Annie Hillier, Planner**
 pcd@bainbridgewa.gov or (206) 780-3773

DATE OF HEARING: June 25, 2020 at 10:00 am (tentative)
 This is a **tentative date only**. Please go to the City website at bainbridgewa.gov and search 'Project Hearing Schedule' to view any updates on the date/time of the hearing. Hearings are held at Bainbridge Island City Hall, Council Chambers, 280 Madison Avenue North, Bainbridge Island.

PROJECT DOCUMENTS: <https://ci-bainbridgeisland-wa.smartgovcommunity.com/PermittingPublic/PermitDetailPublic/Index/46c0d921-9a63-4d1a-a6d2-ab12012fcbb5?conv=1>

To review documents and environmental studies submitted with this proposal, please follow the link above or go to the City website at bainbridgewa.gov, select 'Online Permit Center' and search using the project information noted above. Files are also available at the Planning & Community Development Department at City Hall.

ENVIRONMENTAL REVIEW:	This proposal is exempt from State Environmental Policy Act (SEPA) review pursuant to WAC 197-11-800.
REGULATIONS/POLICIES:	Applicable development regulations and policies to be used for project mitigation and consistency include, but may not be limited to, the City of Bainbridge Island 2016 Comprehensive Plan, the Bainbridge Island Municipal Code (BIMC) Chapter 2.16 (Land Use Review Procedures), Title 15 (Buildings and Construction), Title 16 (Environment) and Title 18 (Zoning).
OTHER PERMITS:	Other permits not included in this application but known at this time include building permits.
DECISION PROCESS:	This type of land use application is classified as a 'Quasi-Judicial Decision by a Hearing Examiner' pursuant to BIMC 2.16.010-1 and requires a public hearing pursuant to BIMC 2.16.020.C. Following the close of the public hearing, the Hearing Examiner will issue a written decision and a notice of the decision will be sent to those parties who comment on this notice or participate in the public hearing. Appeal provisions will be included with the notice of decision.

PLN51228 RUE Huguet-Kroman RUE

March 27, 2020

Owner	Mailing Address	Mailing City	Mailing State	Mailing Zip
ALLENS COVE HOMEOWNERS ASSOCIATION	PO BOX 11410	BAINBRIDGE ISLAND	WA	98110
BAAS JONATHAN	14455 MADISON AVE NE	BAINBRIDGE ISLAND	WA	98110
CARLSON PAULA R TRUSTEE	9138 NE HIDDEN COVE	BAINBRIDGE ISLAND	WA	98110
CHUN SHERRY M L	PO BOX 15179	SEATTLE	WA	98115-0179
CONLAN MICHAEL R & NITA A	321 HIGH SCHOOL RD NE UNIT D3 PMB 572	BAINBRIDGE ISLAND	WA	98110-2648
COURTWAY EDGAR N & MELONI H	9234 NE HIDDEN COVE RD	BAINBRIDGE ISLAND	WA	98110
DAVIDSON MILLARD M & LINDA J TRUSTEES	9000 NE HIDDEN COVE RD	BAINBRIDGE ISLAND	WA	98110-4105
FAR ECHO FARMS LLC	14755 HENDERSON RD NE	BAINBRIDGE ISLAND	WA	98110
FISER NOEL REED	14432 PHELPS RD NE	BAINBRIDGE ISLAND	WA	98110-1109
GAUDIO DALE E	677 E 4025 ST UNIT H	SALT LAKE CITY	UT	84107-1951
GOLDTHWAIT JOHN	255 STATE ST FL 6	BOSTON	MA	02109-2617
HUGUET JUSTIN B & KROMAN EMILY E	9185 NE SPARGUR LOOP RD	BAINBRIDGE ISLAND	WA	98110
KALLIS MORTON J TRUSTEE	9118 NE HIDDEN COVE RD	BAINBRIDGE ISLAND	WA	98110
LAPLACA BRIAN J & STACIE A	9223 ALLENS COVE LN NE	BAINBRIDGE ISLAND	WA	98110
LASOFF MARC & LYNN	9019 SPARGUR LOOP RD	BAINBRIDGE ISLAND	WA	98110
MACMILLAN DANIEL J & MELINDA H &	14603 MADISON AVE NE	BAINBRIDGE ISLAND	WA	98110-4138
MOHR KATHY P	9234 ALLENS COVE LN NE	BAINBRIDGE ISLAND	WA	98110-1128
PEABODY KIM E	9186 NE HIDDEN COVE RD	BAINBRIDGE ISLAND	WA	98110
PUGLIESE VINCENT P & BARBARA K	5250 NOBLE AVE	SHERMAN OAKS	CA	91411-3906
ROSE JENNIFER A & LANE DARRYL C	14445 PHELPS ROAD NE	BAINBRIDGE ISLAND	WA	98110
SCHWARTZ MICHAEL W & PATRICIA	14630 MADISON AVE NE	BAINBRIDGE ISLAND	WA	98110
SENCERBOX JOHN E	14619 PHELPS RD NE	BAINBRIDGE ISLAND	WA	98110
SHEPHERD HUNTER	10510 NORTHUP WAY STE 300	KIRKLAND	WA	98033
SWANSON PAUL E & VIRGINIA E	14519 PHELPS RD	BAINBRIDGE ISLAND	WA	98110
THOMPSON DIANE CARLSON	9060 NE SPARGUR LOOP RD	BAINBRIDGE ISLAND	WA	98110
WELCH ANDREW K & MARIANN P	8955 NE SPARGUR LOOP RD	BAINBRIDGE ISLAND	WA	98110
WILLIAMS ISABEL S & DAVIS CALEB M	14607 PHELPS RD NE	BAINBRIDGE ISLAND	WA	98110
ZITRELLI PAUL K & LARSEN KELLI Y	14521 MADISON AVE NE	BAINBRIDGE ISLAND	WA	98110

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Bainbridge Island Review

Bill To:

City of Bainbridge Island-LEGALS
280 Madison Ave N
Bainbridge Island WA 98110

Customer Account #: 80604980

Legal Description: BIR895143

Legal Description: City Applications

Desc: HUGUET-KROMAN RUE

Legal #: BIR895143

Ad Cost: \$ 81.46

Ordered By: CARLA LUNDGREN

Published: Bainbridge Island Review

Issues Ordered: 1

Start Date: 03/27/2020 **End Date:** 03/27/2020

Due: \$ 81.46

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280 Madison Ave N
Bainbridge Island WA 98110

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Due: \$ 81.46

Bainbridge Island Review

Affidavit of Publication

State of Washington }

County of Kitsap } ss

Dicy Sheppard being first duly sworn, upon oath deposes and says: that he/she is the legal representative of the Bainbridge Island Review a weekly newspaper. The said newspaper is a legal newspaper by order of the superior court in the county in which it is published and is now and has been for more than six months prior to the date of the first publication of the Notice hereinafter referred to, published in the English language continually as a weekly newspaper in Kitsap County, Washington and is and always has been printed in whole or part in the Bainbridge Island Review and is of general circulation in said County, and is a legal newspaper, in accordance with the Chapter 99 of the Laws of 1921, as amended by Chapter 213, Laws of 1941, and approved as a legal newspaper by order of the Superior Court of Kitsap County, State of Washington, by order dated June 16, 1941, and that the annexed is a true copy of BIR895143 HUGUET-KROMAN RUE as it was published in the regular and entire issue of said paper and not as a supplement form thereof for a period of 1 issue(s), such publication commencing on 03/27/2020 and ending on 03/27/2020 and that said newspaper was regularly distributed to its subscribers during all of said period.

The amount of the fee for such publication is \$81.46.

Dicy Sheppard

Subscribed and sworn before me on this

3rd day of April,
2020.

Linda Phillips

Notary Public in and for the State of Washington.

City of Bainbridge Island-LEGALS | 80604980
CARLA LUNDGREN





NOTICE OF APPLICATION

Notice is hereby given that the City of Bainbridge Island Planning & Community Development has received a Notice of Application/Public Hearing for the following development proposal(s).

Project Name: Huguett-Kroman RUE

Project Number: PLN51228 RUE

Site Location: NE Spargur Loop Rd

Project Description: Single family residence and garage within wetland buffer. Tentative Public

Hearing Date/Time: June 25, 2020 @ 10:00 AM.

Location of Hearing: City Hall COBI Staff Planner: Annie Hillier 206-780-3773

Any person may comment on the proposed application and/or request a copy of any decision. Only persons of record may appeal the decision. Contact the COBI Staff Planner listed above with questions, concerns and/or a request to receive further notice in reference to this project.

Comments must be submitted no later than 4:00pm on Friday, April

17, 2020. Comments can be submitted to pod@bainbridgewa.gov or Planning & Community Development – 280 Madison Ave N, Bainbridge Island, WA 98110.

For more information on this project or to view the published legal notice, visit <https://www.bainbridgewa.gov/433/Proposed-Land-Use-Actions>.
Published: Bainbridge Island Review
March 27, 2020
Legal #: BIR895143



CERTIFICATE OF POSTING

I, Emily Kroman + Justin Huguet, certify that the following sign(s)

- ☒ Proposed Land Use Action
- ☐ Tree and Vegetation Removal Permit
- ☒ Public Hearing
- ☐ Public Participation Meeting
- ☐ Other _____

were posted on 3/30/20 for the following application at the address listed below:
(date)


Project Name - Huguet-Kroman RUE

Permit Number - PLN51228

Physical Property Address - NE Spargur Loop Road

Tax Assessor Number(s) - 34260240332007

I declare under the penalty of the perjury laws of the State of Washington that the foregoing is correct.


Signature

3/30/20
Date

Instructions for posting signs:

- Sign must be posted within 5 days of Notice of Application or permit issuance.
- Sign must be posted where it is continually and clearly visible to passersby and neighbors.
- Sign must be posted overlooking the water on any waterfront property.
- Sign must be on the subject property, NOT in the right-of-way.
- Sign must remain in place until project completion.
- Upon project completion and/or final decision, the applicant is responsible for removing signs.

Email completed form within 48 hours of posting the signs to:

pcd@bainbridgewa.gov

Please note: Paper copies WILL NOT be accepted. Submit via email only.



Department of Planning and Community Development

Memorandum

Date: April 29, 2020
To: Emily Kroman and Justin Huguet
From: PCD
Subject: Information request

Dear Emily and Justin,

This memorandum is intended to provide an update to the previous memo sent April 20, 2020 and contains a list of items that staff recommends addressing prior to the City's final recommendation to the hearing examiner.

1. Consistent with the Fire Marshal's comments, please provide the driveway width. If driveway widening is necessary, please adjust the site plan, wetland figures, and mitigation plan to account for new impacts to the wetlands or wetland buffers.
2. Please determine if permeable hardscaping is feasible in the areas of the existing driveway and new driveway (see attached memo from Paul Nylund). If new impervious surfaces must be proposed, please identify these areas on the site plan and wetland figures, and determine if this will result in increased runoff to the wetlands and whether this requires additional mitigation.
3. Please identify any impacts from the proposed conversion to a 2-party well that may occur within the wetland buffer. Please consider the location of the pump house, storage tanks, digging/trenching for piping, and any other activities located in the wetland buffer. Please update the site plan, wetland figures, and wetland mitigation plan, as applicable.
4. Please address reasonable use criteria #2, *there is no reasonable alternative to the proposal with less impact to the critical area or its required buffer*. An alternative to the proposed residential use that may have less impact to the wetland buffer might be a residence with an attached garage or an under-building garage, as the development would be even further concentrated in one area. From the application it is not clear if such a proposal would reduce impacts, or if there are other alternative site layouts that could reduce impacts. Staff recommends that the applicant provide an analysis of alternatives to the proposal in order to identify the layout with the least impact. In your analysis, you may wish to factor in the use of low-impact foundation designs (see attached memo). Alternatively, the applicant has the option of addressing this criterion during the hearing to the satisfaction of the Hearing Examiner.

5. Please clarify: will any significant trees be removed as a result of the proposal? If so, please identify on the site plan and determine if any are in wetland buffers, potentially requiring additional mitigation.
6. Please work with the project biologist and surveyor to reconcile the issue of the “approximate” wetland boundary for wetland B. The survey, which is required for the base map for the mitigation plan, must depict delineated wetland boundaries. A note from the surveyor or biologist, as applicable, is acceptable if the delineated wetland boundary as depicted on the survey is accurate.
 - a. As a part of this item, please provide additional information about how the wetland boundary for wetland B was determined in the field, given the lack of native vegetation or obvious surface hydrology. Were transects completed to identify the wetland edge using subsurface hydrology indicators or soil indicators, or were other methods used? Please describe.
7. Please determine if the proposed septic system is located in a wetland or wetland buffer (I understand from our discussion that it is likely not within a wetland). As previously mentioned, if the proposed septic system is in a wetland buffer, a critical areas permit is required. Review procedures for critical areas permits are found in BIMC 16.20.070. A wetland mitigation plan is required for impacts to the buffer.
 - a. Please note that the granting of the RUE does not guarantee City approval of a critical areas permit for the septic system. Therefore staff recommends beginning the process to permit the septic system, starting with the wetland delineation and rating, and a feasibility discussion with the wetlands biologist, prior to completing the RUE. That way the applicant will have some assurance that the criteria for a critical areas permit can be met.

If possible, please submit responses/revisions to the items requested above as a single resubmittal package. If you must submit your responses separately, please provide the number of the item you are responding to. Please submit the requested items by June 1st in order to allow enough time for staff to review and prepare a recommendation to the hearing examiner. If this deadline is too tight, staff can reschedule the hearing for a later date – please just let us know. And of course, if you have questions about any of these items, please do not hesitate to reach out.

Sincerely,
Annie Hillier



WETLAND DELINEATION & BUFFER MITIGATION

October 14, 2019

Revised July 22, 2020



Spargur Loop Property *Bainbridge Island, Washington*

Prepared for

Justin Huguet

Emily Kroman

9185 Spargur Loop Road

Bainbridge Island, WA 98110

(206) 919-6546

Prepared by

Ecological Land Services

1157 3rd Avenue, Suite 220A • Longview, WA 98632

(360) 578-1371 • Project Number 2758.01

TABLE OF CONTENTS

INTRODUCTION	1
METHODOLOGY	1
PROPERTY DESCRIPTION	2
VEGETATION	2
SOILS	3
HYDROLOGY	4
NATIONAL WETLAND INVENTORY	4
BAINBRIDGE ISLAND CRITICAL AREAS MAPS	4
CONCLUSIONS	4
WETLAND CATEGORIZATION	4
CRITICAL AREA REGULATIONS	5
DEVELOPMENT PROPOSAL	6
REASONABLE USE EXCEPTION	6
MITIGATION SEQUENCING	6
BUFFER MITIGATION PLAN	8
BUFFER FUNCTIONS	8
BUFFER MITIGATION JUSTIFICATION	9
SPECIFICATIONS FOR SITE PREPARATION	10
GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS	11
SPECIFICATIONS FOR PLANTING	11
MAINTENANCE PLAN	13
MONITORING PLAN	13
CONTINGENCY PLAN	14
NO-NET-LOSS ASSESSMENT	14
CUMULATIVE IMPACTS	15
LIMITATIONS	16
REFERENCES	17

FIGURES & PHOTOPLATES

Figure 1	Vicinity Map
Figure 2	Site Map
Figure 3	Site Plan
Figure 4	Soil Survey Map
Figure 5	National Wetlands Inventory
Figure 6	Bainbridge Island Critical Areas Map
Figure 7	WRF - 150' Offset
Figure 8	WRF – 1 KM Offset
Figure 9	Buffer Mitigation Overview
Figure 10	Buffer Mitigation Planting Plan
Figure 11	Wetland Rating Figure – 303(d)/TMDL
Photoplates	Site Photos

Tables:

Table 1: *Summary of Wetland Ratings*

Table 2: *Planting Specifications*

APPENDIX A

Wetland Determination Data Forms

APPENDIX B

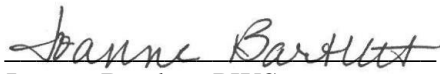
Western Washington Wetland Rating Form

APPENDIX C

Non-Wetland Determination Letter for Drainfield Easement

SIGNATURE PAGE

The information and data in this report were compiled and prepared under the supervision and direction of the undersigned.

A handwritten signature in cursive script, reading "Joanne Bartlett", written in black ink.

Joanne Bartlett, PWS
Senior Biologist

INTRODUCTION

Ecological Land Services, Inc. (ELS) was contracted by Justin Huguet and Emily Kroman to conduct a wetland boundary delineation and critical areas report for the property located on Spargur Loop Road, Kitsap County Tax Parcel No. 342601-4-026-2005, Bainbridge Island, Washington. The project site is located within a portion of Section 34, Township 26 North, Range 2 East of the Willamette Meridian (Figure 1). This report summarizes the findings of the wetland delineation according to the *Bainbridge Island Municipal Code (BIMC), Chapter 16.20.160* (2018) for delineation methodology, wetland categorization, and required buffer widths. The report also includes buffer mitigation required for the Reasonable Use Exception (RUE) to accommodate a house on this property because it is fully encumbered by critical areas.

METHODOLOGY

The wetland delineation followed the Routine Determination Method according to the U.S. Army Corps of Engineers, *Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region, Version 2.0* (U.S. Army Engineer Research and Development Center 2010).

The Routine Determination Method examines three parameters—vegetation, soils, and hydrology—to determine if wetlands exist in a given area. Hydrology is critical in determining what is wetland but is often difficult to assess because hydrologic conditions can change periodically (hourly, daily, or seasonally). Consequently, it is necessary to determine if hydrophytic vegetation and hydric soils are present, which would indicate that water is present for long enough duration to support a wetland plant community. By definition, wetlands are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are regulated as “Waters of the United States” by the U.S. Army Corps of Engineers (USACE), as “Waters of the State” by the Washington Department of Ecology (Ecology), and locally by the City of Bainbridge Island.

To delineate the wetland boundaries on the property, ELS biologists collected data on vegetation, hydrology, and soils. The delineation site visit conducted on July 6, 2018 during which four wetlands were identified and delineated. The wetland boundaries were delineated using consecutively numbered fluorescent flags labeled “WETLAND DELINEATION.” Wetland boundary was determined through breaks in topography, changes in vegetation, and evidence of wetland hydrology. Vegetation, hydrology, and soil data was collected at eight test plots to verify the wetland boundary (Appendix A). The wetland boundary was mapped using a Trimble handheld Global Positioning System (GPS) unit to show on the site map (Figure 2).

The boundary of Wetland B was especially complex to identify particularly in the sloping meadow area of the property. The boundary in this area was identified by presence of subsurface hydrology in Test Plot 2, which is within the southern tip of the wetland, along with the dominance of FAC species. Test Plot 1 was conducted downslope of Wetland B and revealed the absence of surface or subsurface hydrology. The vegetation in the upland was dominated by FAC to FACU species. The presence of hydrology within Wetland B during the July 2018 field delineation was a strong

indicator that wetland conditions were present. If hydrology had been present in Test Plot 1, this area would have also been included as part of the wetland.

PROPERTY DESCRIPTION

The 1.03-acre rectangular shaped property is situated on the south side of Spargur Loop Road just east of the home at 9185 NE Spargur Loop Road in the Port Madison area of Bainbridge Island, Kitsap County, Washington (Figure 1). The property is currently undeveloped except for a driveway from Spargur Loop Road (Figure 2; Photoplate 3). It slopes gradually down from south to north. The southwestern portion is composed of a mowed lawn area at the south end of the existing driveway (Photoplates 1 and 2) and the remainder of the property is composed of deciduous forest containing wetlands, uplands, and drainages. The open lawn area is continuous with the lawn on the adjoining western property because both properties are under the same ownership and are regularly maintained together (Photoplate 1). Residential development on similarly sized properties are located to the south, east, and west (the house to the west is under the same ownership as this property).

Three of the four wetlands are located on the northern half and two extend offsite to the east. The fourth wetland lies in the south half. Wetlands A and B are wholly on the east half of the property with wetland areas that are part of Wetlands C and D coming on the northeast and northwest portions of the property (Figure 2). Wetlands A, C, and D are composed of forested communities with three layers of vegetation (Photoplates 5 and 6) while Wetland B has some forested vegetation but is largely emergent (Figure 7; Photoplate 4). There is a small stream that flows along the east line bypassing Wetlands A and B and crossing the west end of Wetland C. The stream discharges into the roadside ditch, which flows westerly. The wetlands are each Category III slope systems that require 110-foot buffers, which cover all the upland on this property.

VEGETATION

The forested community within each wetland was dominated by red alder (*Alnus rubra*, FAC) in the tree layer and the dense shrub layer dominated by salmonberry (*Rubus spectabilis*, FAC). The herbaceous layer was mostly sparse and there were low percentages of skunk cabbage (*Lysichiton americanum*, OBL), lady fern (*Athyrium cyclosorum*, FAC), fringe cup (*Tellima grandiflora*, FACU), sword fern (*Polystichum munitum*, FACU), trailing blackberry (*Rubus ursinus*, FACU), and horsetail (*Equisetum arvense*, FAC) occurring at varying percentages. The mowed area was dominated by mowed grasses and creeping buttercup (*Ranunculus repens*, FAC). English ivy (*Hedera helix*, FACU) was present at high percentages at Test Plot 5 and was present in Test Plot 7 at much lower percentages.

The upland area of the property is not extensive because of the coverage by wetland. The forested portions of the upland area were dominated by red alder and low coverage by western hemlock (*Tsuga heterophylla*, FACU). The shrub layer is dominated by salmonberry and red huckleberry (*Vaccinium parvifolium*, FACU) with lower percentages of holly (*Ilex aquifolium*, NI (assumed FACU)) and cherry laurel (*Prunus laurocerasus*, NL (assumed FACU)). The herbaceous layer was dominated by fringe cup, sword fern, trailing blackberry, and horsetail. Ivy was present in some portions of the upland but had the highest coverage at the north end between Wetland A and Wetland C. The mowed upland on the west side was dominated by mowed grasses, creeping

buttercup, and dead nettle (*Lamium amplexicaule*, FACU) with lower percentages of hairy cat's ear (*Hypochaeris radicata*, FACU).

The dominant vegetation found onsite is recorded on the attached wetland determination data forms (Appendix A). The indicator status, following the common and scientific names, indicates how likely a species is to be found in wetlands. Listed from most likely to least likely to be found in wetlands, the indicator status categories are:

- **OBL** (obligate wetland) – Almost always occur in wetlands.
- **FACW** (facultative wetland) – Usually occur in wetlands but may occur in non-wetlands.
- **FAC** (facultative) – Occur in wetlands and non-wetlands.
- **FACU** (facultative upland) – Usually occur in non-wetlands but may occur in wetlands.
- **UPL** (obligate upland) – Almost never occur in wetlands.
- **NI** (no indicator) – Status not yet determined.

SOILS

As referenced on the Natural Resources Conservation Service Web Soil Survey (NRCS 2019) website, McKenna gravelly loam (32) is mapped on the entire property and is part of a larger map unit that is primarily west of the property (Figure 4). McKenna gravelly loam is a moderately deep over compacted glacial till and poorly drained soil that formed in glacial till. It is on uplands in low lying depressions and along drainageways. McKenna soil is classified as hydric (NRCS 2016). Areas mapped as hydric soils do not necessarily mean that an area is or is not a wetland—hydrology, hydrophytic vegetation, and hydric soils must all be present to classify an area as a wetland.

The soil profiles within the forested components of these wetlands were composed of thick dark surface layers ranging from 14 to 16 inches. These layers were composed of muck to silt loam soils and dark brown (10YR 2/1) matrix chromas. Two of the soil profiles extended deeper than 16 inches and the third was underlain by silt loam with a depleted matrix (10YR 4/1) and 5 percent redoximorphic concentrations having a yellow brown (10YR 4/6) chroma. The two test plots exhibiting muck soils also emitted sulfidic odor so meet hydric soil indicators A1-Histosol and A4-Hydrogen Sulfide. The other test plot had a thick dark surface over a depleted matrix with redoximorphic concentrations so met hydric soil indicator A12-Thick Dark Surface.

The soil profile revealed in the emergent area of Wetland B is composed of a 4 inch sandy silt loam having a dark brown (10YR 3/2) matrix chroma over a clay layer having a gleyed color of 10GY 4/1 (Munsell Gley page 2) and 15 percent redoximorphic concentrations having a yellow brown (7.5YR 4/6) chroma. This profile meets hydric soil indicator F2 because of the gleyed loam beginning at 4 inches.

The upland soil profiles consisted thick surface layers of loam, fine sandy loam, and silt loam (12-16 inches) that had dark brown (10YR 2/1 to 10YR 3/3) matrix chromas. The underlying layers consisted of loam, sandy loam, and gravelly loam that had depleted matrix chromas (10YR 4/1 to 2.5Y 4/1) and redoximorphic concentrations were only observed in one of these three test plots. One of the four upland soil profile has a yellow brown (10YR 4/3) matrix chroma. These soil

profiles do not meet any of the hydric soil indicators because there are no redoximorphic concentrations present in the depleted matrix of two soil profiles and the depleted layer in the third begins greater than 10 inches from the soil surface.

HYDROLOGY

Surface water, a high-water table, and soil saturation were within 12 inches of the surface of test plots in Wetlands A B, and C. Evidence of surface water was present in areas of the wetlands where hydrology was not observed. The indicators of surface water included sparsely vegetated concave depressions. Water was observed in Wetland D as saturation with areas of seasonally flooding and outlets into the ditch along Spargur Loop Road. There is a stream originating offsite to the east that flows northerly and mostly flows through upland areas. It receives hydrology from the northern tip of Wetland B and the stream continues just east of Wetland A and crosses the onsite portion of Wetland C. Wetland A itself drains into the shallow ditch on the east side of the existing driveway, which conveys water to the roadside ditch. The stream outlets into the roadside ditch, which flows westerly toward Hidden Cove. Water was present in the stream during the July 6, 2018 site visit. The source of water for the onsite wetlands appears to be a combination groundwater discharge, seasonally high-water table, and direct precipitation. Hydrology was not present in any of the upland areas and there was no evidence of wetland hydrology, so the hydrology parameter is not met.

NATIONAL WETLAND INVENTORY

The National Wetlands Inventory (USFWS 2019) does not map wetlands on or within 300 feet of the property (Figure 5). The ELS findings disagree with the mapping as portions of four wetlands consisting of emergent and forested communities were identified on this property. The NWI maps should be used with discretion because they are used to gather general wetland information about a regional area and therefore are limited in accuracy for smaller areas because of their large scale.

BAINBRIDGE ISLAND CRITICAL AREAS MAPS

The City of Bainbridge Island GIS website (COBI 2018) maps a large wetland area across this and the adjacent properties to the north, east, and west (Figure 5). The wetland unit is mapped across developed properties and Spargur Loop Road so no longer exists as mapped. Critical area maps should be used with discretion because they are used to gather general wetland information about a regional area and therefore are limited in accuracy for smaller areas because of their large scale.

CONCLUSIONS

WETLAND CATEGORIZATION

The wetland was rated according to *Washington State Wetlands Rating System for Western Washington-2014 Update* (Rating System) (Hruby 2014), and received ratings based on functions (Appendix B). The four wetlands are located on sloping terrain and none are impounded to necessitate rating as depressional. They are all forested communities with 3 layers but there is also an emergent area in Wetland B and the wetlands have saturated-only hydroperiods. The permanently flowing stream is adjacent or flows through Wetlands A, B, and C but is not close enough to be a hydroperiod within Wetland D.

Table 1: Summary of Wetland Ratings

Wetland	HGM Class	Vegetation Class	Hydroperiods	Total	Category	Habitat Scores
A	Slope	Forested Forested with 3 layers	-Saturated only -Permanently flowing stream adjacent	17	III	6
B	Slope	Forested w/3 layers Emergent	-Saturated only -Permanently flowing stream adjacent	18	III	6
C	Slope	Forested w/3 layers	-Saturated only -Permanently flowing stream	17	III	6
D	Slope	Forested w/3 layers	-Saturated only	14	IV	4

CRITICAL AREA REGULATIONS

The *BIMC Chapter 16.20.140.I* specifies buffers based on wetland category, scores for habitat functions on the rating form, and the intensity of the proposed land use in accordance with the Rating System. Three of the four wetlands meet the Category III criteria and score 6 points for habitat function, which is a moderate value. Wetland D meets the criteria for Category IV. Because the wetlands each have moderate rating for habitat and the property is within the R-0.4 zone (moderate intensity land use), buffers of 110 feet are required from Wetlands A, B, and C and a buffer of 40 feet is required from Wetland D. A 15-foot building and impervious surface setback is also specified from the edge of the critical area buffers.

Administrative buffer reductions are permitted by the *BIMC Section 16.20.140.I.8* through the buffer averaging process wherein the buffer is reduced in one location and increased in another by the same square footage to create a buffer that averages the required buffer width. The *BIMC* also permits 25 percent reductions of wetland buffers if it can be documented that the reduction will provide a buffer that provides adequate protection for the wetland. Buffer reductions beyond what is allowed administratively are required to proceed through the Reasonable Economic Use Exception (RUE) process. Buffer reductions allowed administratively will not result in a reduced buffer that allows construction of a and garage on the property so the project will proceed through the RUE process.

Drainfield Easement

The drainfield for this project is proposed on the adjacent property and is specifically located west of the driveway where it is proposed in the outer buffer of Wetland D (Figure 9). A wetland determination was conducted during which data was collected to verify the absence of wetlands in the drainfield area. The area is composed of upland based on the lack of positive indicators for each of the three wetland parameters (Appendix D).

The drainfield being proposed on the adjacent property requires installation of a sewer line from the homesite and will be required across the southern tip of Wetland D (Figures 3 and 9). The

Kitsap Health Department (KHD) requires that sewer lines be at least 50 feet away from existing and proposed wells. The existing well is located upslope of Wetland D about 40 feet so the sewer line will be routed across the south end of Wetland D. The original design for the septic system proposed crossing further north than is currently proposed. It was realigned to the southern tip to avoid significant impacts to the wetland.

DEVELOPMENT PROPOSAL

The project proposes construction of a single-family and garage on the west side of this property and will utilize the existing driveway as access from Spargur Loop Road (Figure 3). This property is composed entirely of wetland and buffer so there is no opportunity for administrative buffer reductions, therefore, it will proceed through the RUE process to achieve onsite development. The building site is composed of maintained grass so will not require removal of native vegetation (Photoplates 1 and 4). The grass also provides significant opportunity to improve the buffer functions and compensate for the buffer reduction. The septic system is proposed on the property immediately west (under same ownership as development property) and the access is proposed using the existing driveway to minimize the impacts to the wetlands and buffers. The total area of proposed buffer impact is 6,186 square feet and includes the home/detached garage (1,198 square feet), the driveway approach to the home (1,005 square feet) as well as the building setback. A 15-foot building setback is proposed on the south end of the house but has been reduced to 7.5 feet on the north side to allow for additional buffer and buffer enhancement. In addition, the area of septic system impact to the buffer of Wetland D is also included in the impact calculation and mitigation. This 1.03-acre property is 100 percent composed of wetland and buffer; the 0.16-acre buffer impact represents 16 percent of the property. The onsite buffers will be enhanced to increase the function by planting native trees and shrubs in order to compensate for the 6,186 square feet of buffer impact. The buffer areas around all sides of the building site will be enhanced for a total of 6,200 square feet, which represents a ratio of 1.02:1. The buffer enhancement will take place outside the setbacks and cover the open grassy area between the wetlands and the building site (Figure 9).

REASONABLE USE EXCEPTION

The project proposes building one single-family home and detached garage on the west side of this 1.03-acre property, which is entirely encompassed by four wetlands and their overlapping buffers. Administrative options for buffer reduction will not allow for enough buildable area to accommodate the proposed home and garage. Therefore, in order to accommodate the buildings on this property, impacts to the buffer are necessary and must proceed through the RUE process. Buffer mitigation is required to compensate for the buffer reduction per the *BIMC*.

MITIGATION SEQUENCING

The Category III wetlands and their required buffers cover the entire property and extend onto the adjacent property to the west. Because the property is composed entirely of critical areas, the only location for construction of a single-family and garage is the mowed area on the west side. This area is composed of mowed grass and weeds so does not require removal of native vegetation. In addition, the access to the building site will utilize the existing driveway from Spargur Loop Road, which will also avoid impacts to native vegetation. As part of the mitigation process, projects

proposed within a wetland buffer are required to address the mitigation sequencing process to assess whether the project can avoid, minimize, rectify, or reduce impacts before identifying compensation or mitigation measures.

Avoiding Impacts: The project proposes to utilize existing features within the buffer that avoid direct impacts to the wetland. The project cannot avoid impacts to the wetland buffer because the entire property is composed of critical areas. The septic system drainfield is approved for the adjacent property (west) so avoids additional impacts to the onsite buffer and avoids potential water quality impacts to the onsite wetlands. The sewer line proposed across the southern tip of Wetland D cannot be avoided because of KCHD requires sewer lines 50 feet away from existing and proposed wells. The existing well on the adjacent property is only about 40 feet from the southern boundary of Wetland D.

Minimizing Impacts: The home has been located in the only area available for development that allows impacts to be minimized:

- The impacts to the critical area buffers have been minimized by utilizing the existing open grassy area on the west side and the existing driveway.
 - These areas do not have cover by native plant species so minimizes the new impact to the buffer function.
 - The new house and detached garage will have a total footprint of 1,198 square feet.
- Water quality impacts will also be minimized by using the existing driveway, which is impervious and will not result in any additional runoff generated when the driveway is used for the new house.
- Water will be generated on the property and will continue to discharge into the wetlands thereby avoiding impacts to the hydroperiods.
- The drainfield is proposed in upland on the adjacent property, which minimizes total impacts to the onsite wetlands and buffers. It will be situated across the driveway from Wetland D and within the outer portion of the 40-foot buffer.
- The sewer line crossing was originally proposed further north than currently proposed. It was moved to the southern tip of Wetland D to minimize impacts to the wetland by crossing the narrowest portion of the wetland. It will mostly impact the buffer that is composed of driveway, parking, and non-native vegetation.

Rectifying the Impacts: The impacts of crossing Wetland D with a sewer line are somewhat temporary as the area can be restored following installation of the pipe. Rectifying the impacts will include replacement of removed wetland and upland soil followed by replanting of native vegetation. Work through the wetland and buffer will attempt to avoid and minimize impacts to existing trees and significant native vegetation.

Reducing or Eliminating the Impacts: The project cannot reduce or eliminate the impacts by preservation and maintenance.

Compensating for the Impacts: The project cannot avoid, rectify, or reduce the impact to the wetland buffer but has minimized the impact to the extent possible by proposing the new and garage as far from the boundaries of Wetlands A, B, and D as possible. Because the proposal

cannot avoid all impacts to the wetland buffer, mitigation in the form of buffer enhancement is proposed. The enhancement plan will include:

- Compensation will include enhancement of the mowed grass areas of buffers of Wetlands A, B, and D. The impact area totals 6,186 square feet of the house, detached garage, and new section of driveway. The area of buffer enhancement is 6,200 square feet, which is 1.02 times as much as the impact.
- The mowed grass area provides a measure of water quality improvement because of the dominance by grasses and herbaceous weeds. However, the current buffer conditions do not provide screening of noise and light from the future house because it lacks dense woody vegetation. It is widely believed that improving the vegetation in the buffer is more effective than providing a wider buffer (Ecology 2018).
- Buffer enhancement is proposed immediately adjacent to the house and will include installation of trees, shrubs, and herbaceous plants to initiate the creation of a multilayer, forested vegetation community. The multiple layers will provide long term protection of the wetland from the future noise and light impacts. The layers will also provide upland habitat for wildlife species utilizing upland and wetland areas.
- Installation of split-rail fence will be installed along the building setback edge to demarcate the critical area and to limit human intrusion.

Monitoring the Impact: This buffer mitigation plan includes monitoring for a period of five years after the plants are installed and is designed to track the development of the vegetation and the mitigation plan goal of achieving no-net-loss of buffer function. Monitoring will include yearly visits to the site to determine the survival rate, percent cover by native plants (installed and volunteer), and the cover by invasive plant species. Monitoring reports will be submitted yearly to the Bainbridge Island Planning Department. Maintenance is also specified during the monitoring period to ensure the mitigation areas do not become dominated by invasive plant species. The cover by invasive species will be monitored yearly as part of the monitoring protocol.

BUFFER MITIGATION PLAN

The project proposes to permanently impact 6,186 square feet of the buffer in order to build the 1,198 square foot single-family home/detached garage and 1,005 square feet of the extended driveway/parking area (Figure 9). Mitigation for impacts to the buffer will include native plant installation in buffer areas north, east, and west of the proposed house to ensure improvement of functions for protection and habitat. The total area of buffer mitigation is 6,200 square feet. The mitigation planting plan (Figure 10) will include species that currently are found on or adjacent to the property and will improve buffer function. In addition, the sewer line crossing through Wetland D will be replanted with native species following installation of the pipe. Areas of wetland and upland buffer will be impacted by the sewer line crossing, which total 915 square feet, and each area will be replanted with appropriate species.

BUFFER FUNCTIONS

The width of buffers necessary to protect a critical area from degradation is related to the functions of the critical area and the buffer itself (Castelle, et al. 1992). Buffers function to protect water quality of critical areas including wetlands by removing sediment and nutrients from runoff. The function depends on the type of soils, vegetation, and characteristics of the

runoff. The function of buffers is also based on width and slope. In some cases, buffers as low as 50 feet are effective in filtering pollutants when there is dense groundcover, no slope or a gradual slope, and the runoff sheet flows across the buffer. The current buffer is composed of dense mowed grasses and herbaceous weeds that have some ability to improve water quality before it flows into the wetland areas. It currently provides no habitat or wetland protection functions because it lacks native woody vegetation cover. There is forested buffer along both sides of the driveway that do not require enhancement because they are dominated by native trees and shrubs.

BUFFER MITIGATION JUSTIFICATION

- **Site Selection Criteria**

- There are three areas of buffer mitigation proposed for this project. All three areas are composed of mowed grass with blackberry thickets in one area. Most of the mitigation area is south of the house and within the buffer of Wetland B. Smaller areas of buffer enhancement lie between the development and Wetlands A and D (Figure 9). The buffer is currently dominated by mowed grasses and herbaceous weeds, so the only function provided is water quality improvement. The proposed mitigation will increase the ability of the buffer to provide water quality improvement by adding native trees and shrubs that function to slow the flow of potential runoff. Planting in the mowed grass area also allows for the development of a three-layer forested community that will have significantly higher function than the buffer in its current condition. Upland buffer core habitat is an important component of wetland habitat because it provides habitat for a wide variety of wildlife species. The current conditions provide little core habitat because of the inadequate quantity or quality of the existing mowed grass upland (Hruby 2013).

- **Compensation Goals**

- The dominance by blackberry in the upland buffer reduces the cover by native species that can provide habitat, protection, and foraging areas for local wildlife species. The grassy upland buffer provides no habitat or protection for the wetland but has some value for water quality improvement. The removal of blackberry thickets and plant installation in the blackberry area and the mowed grass area will improve the overall function of the buffer for wetland protection and habitat while maintaining the current water quality function (Granger et. al. 2005). The planting of native species will also allow for development of a forested buffer by providing sources of downed wood (Hruby 2013), which is not available to the current buffer condition.
- A mix of coniferous and deciduous trees are proposed to create a diverse upper layer of the future forested buffer. The understory will be planted with evergreen and deciduous shrub species and ferns that will provide year-round cover and habitat for species utilizing the wetland and upland areas. By providing a diverse system of evergreen and deciduous species there will be a significant improvement of the buffer function by providing year-round cover and providing a vertically and horizontally diverse vegetation community (Granger et. al. 2005).
- The buffer plantings will create a trend toward an upland area that emulates the onsite wetland and buffer forest (Granger et. al. 2005).

- **Buffer Mitigation Success**

- Typically, likelihood of success is associated with creation or restoration of wetland as compensation for direct wetland impacts. No direct wetland impacts are proposed for this project; therefore, no wetland mitigation is required.
- Buffer mitigation, which often includes onsite enhancement of existing disturbed buffer, is conducted on a regular basis to compensate for necessary buffer reductions. There is little data on the success of buffer mitigation except anecdotally from local wetland professionals, including Ecological Land Services, Inc. (ELS). ELS has conducted many buffer mitigations over the years that have successfully improved buffer functions and diversity through removal of invasives and installation of native plants.
- The success of a buffer mitigation plan depends on the species selected for installation. Planting native species that occur in the area indicates they are common and will do well in the planting area. Prior to development of this area, particularly the house to the west, the buffer was likely composed of an upland forest that was similar to the forested portions of the upland buffer. The plan proposes to install plants that occur or may have occurred on the property historically.
- The likelihood of the ability of the enhanced buffer to provide improved buffer functions is high when looking at the condition of the existing buffer, which lacks dominant woody species. The factors associated with the likelihood of success are species selection, attainable performance standards and compensation goals, and follow-up maintenance. There are no changes to the water dynamics of the buffer or the wetland because no direct impacts (filling) of the wetland is proposed. The slope of the buffer will not change as a result of the buffer mitigation because no grading is proposed to change elevations or the slope of the upland buffer. Therefore, there will be no alteration to the surface or groundwater supply and flow patterns, dynamics of the ecosystem, sediment or pollutant influx and/or erosion, periodic flooding and drought, etc.

Wetland and Buffer Restoration

The sewer line from the proposed house to the offsite drainfield will cross through the southern tip of Wetland D because health department requirements specify that sewer lines be at least 50 feet from existing and proposed wells. The area of wetland in the sewer line area is 319 square feet and the area of buffer is 596 square feet for a total area of 915 square feet of impact. Trees and significant vegetation will be avoided during installation of the sewer line and the area replanted with native emergent species following restoration of the soil over the pipe. The shrubs that are impacted will recover following the replacement of the soils, so installation of woody plants is not proposed. Shrubs and ferns will be planted within the upland portion of the sewer line crossing.

SPECIFICATIONS FOR SITE PREPARATION

The tasks listed below will achieve the buffer mitigation goals and objectives. These tasks are listed in the order they are anticipated to occur; however, some tasks may occur concurrently or may precede other tasks due to site and procedural constraints.

Buffer Mitigation Area

1. Define extent of the buffer mitigation areas.
2. Remove invasive species and retain all existing native vegetation revealed during blackberry removal.
3. Install plantings according to specifications proposed herein.
4. Place woody mulch or organic compost around plants after installation to minimize regrowth of invasives and to allow soil moisture retention.
5. Install split-rail fence around the edge of the building setback (after home construction).

GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS

Project Goal: The main goal of this project is to increase the function of the buffer through installation of a variety of plant species.

Objective 1: Control invasive species.

Performance Standards 1 (a): During monitoring Years 1 through 5, invasive species will be removed and suppressed within the wetland buffer as often as necessary to meet a performance standard of no greater than 10 percent cover by invasive species.

- Invasive species may include, but are not limited to, Himalayan blackberry, English holly, reed canarygrass, and English ivy. Percent cover will be recorded annually and include in monitoring reports.

Objective 2: Improve native plant cover and buffer function.

Performance Standard 2 (a): The project will maintain at least 90 percent survival of plants during the first three years of the 5-year monitoring period. Plant species number will be recorded annually and compared with as-built conditions for inclusion with the monitoring reports.

Performance Standard 2 (b): Native installed and volunteer species in the buffer mitigation area and the sewer line restoration area will provide a minimum of 10-percent cover in Year 1, 10 to 15-percent cover in Year 2, 15 to 25 percent cover in Year 3, 25 to 40 percent cover in Year 4, and 40 to 50 percent in Year 5. Plant species and percent cover will be recorded annually and included in monitoring reports.

SPECIFICATIONS FOR PLANTING

The plants specified for installation are intended to create a naturally vegetated wetland buffer that will both screen noise and light from the developed upland, provide shade, and improve core habitat. Most of the plants will be potted, 1 gallon in size, from local nurseries stocking native plants. Plants will be installed during the dormant season from October to March so that they are in the ground when conditions are optimal and can get a good start. Installation should occur after home construction activities are completed to avoid undue impact to the plants.

Plant Materials

1. Plants will be purchased from local nurseries stocking native species.
2. Potted plants will be 1 gallon in size.
3. No damaged or desiccated roots or diseased plants will be accepted.

Planting Specifications

Table 2 provides a list of plants proposed for installation within the mitigation areas. Plantings will be spaced to allow for access around the planted species for the continual need for removal of invasive plants. Plants indicated on the planting plan are subject to availability from regional native plant nurseries and may be substituted with similarly performing native plants. The final location of the plants may differ from the planting plan, as site conditions dictate, and any changes will be documented on the as-built drawing prepared after completion of plant installation.

Table 2: Planting Specifications

Species	Spacing (feet)	Quantity	Size
<i>TREE & HIGH STATURE SHRUB STRATUM</i>			
Vine maple (<i>Acer circinatum</i>)	10	14	1 gallon
Black hawthorn (<i>Crataegus douglasii</i>)	10	12	1 gallon
Sitka spruce (<i>Picea sitchensis</i>)	10	20	1 gallon
Douglas fir (<i>Pseudotsuga menziesii</i>)	10	16	1 gallon
Total		60	
<i>LOW STATURE SHRUB & HERBACEOUS STRATUM</i>			
Mock orange (<i>Philadelphus lewisii</i>)	4	60	1 gallon
Indian plum (<i>Oemleria cerasiformis</i>)	4	60	1 gallon
Evergreen huckleberry (<i>Vaccinium ovatum</i>)	4	35	1 gallon
Snowberry (<i>Symphoricarpos albus</i>)	4	60	1 gallon
Oregon grape (<i>Mahonia nervosa</i>)	4	85	1 gallon
Sword fern (<i>Polystichum munitum</i>)	3	57	1 gallon
Shrub/Herbaceous Total		330	
Total Buffer Mitigation Plants		395	
<i>SEWER LINE RESTORATION PLANTINGS</i>			
Vine maple (<i>Acer circinatum</i>)	10	2	1 gallon
Oregon grape (<i>Mahonia nervosa</i>)	4-5	15	1 gallon
Sword fern (<i>Polystichum munitum</i>)	4-5	15	1 gallon
Slough sedge (<i>Carex obnupta</i>) (wetland only)	2	80	1 gallon
Total Sewer Line Plantings		112	

Plant Installation Specifications

1. Install plants in the winter months following construction of the proposed home as listed in Table 2. Space the plants somewhat irregularly and in groups to create eventual dense heterogeneity in the planting area, leaving enough space between each group to allow for access for weed removal. Plant the potted stock with a tree shovel or comparable tool.
2. Place the plants in the planting holes and position the root crowns so that they are at, or slightly below, the level of the surrounding soil. Planting just below the surrounding soil will create a shallow depression around each plant for retention of water.
3. Firmly compact the soil around the planted species to eliminate air spaces.
4. Install anti-herbivory devices, such as seedling protection tubes or mesh protection netting, around the stems of planted species when appropriate, and secure them with stakes.
5. Irrigate all newly installed plants as site and weather conditions warrant.

MAINTENANCE PLAN

Maintenance of the wetland buffer mitigation areas will occur for five years and will involve removing invasive plant species, irrigating planted species, and reinstalling failed plantings, as necessary. The maintenance may include the following activities:

1. Remove and control invasive vegetation around all installed plants a minimum of two times during the growing season for the first five years.
2. Irrigate planted species as necessary during the dry season, approximately July 1 through October 15. ELS recommends that watering occur at least every two weeks during the dry season for the first three years. The most successful method of watering plants is using a temporary above-ground irrigation system set to a timer to ensure the plants are regularly watered.
3. Replace dead or failed plants as described for the original installation to meet the minimum annual survival rate and percent cover performance standards.

MONITORING PLAN

The mitigation and restoration areas will be monitored annually for a 5-year period following plant installation. Monitoring reports will be submitted to the Bainbridge Island Department of Community Development (BIDCD) by December 31st of each monitored year. The goal of monitoring is to determine if the previously stated performance standards are being met. The mitigation area will be monitored once during the growing season, preferably during the same two-week period each year to better compare the data. Individual monitoring units may be established within the mitigation area to track the changes occurring over the monitoring period.

Vegetation

Vegetative monitoring will document the development of the three-layer forested buffer community. The following information will be collected in the buffer mitigation area:

- Percent cover and frequency of herbaceous species.
- Percent cover and frequency of sapling/shrub species.
- Percent cover and frequency of tree species.

- Species composition of herbs, shrubs, and trees, including non-native, invasive species.
- Photo documentation of vegetative changes over time.

Monitoring Report Contents

The annual monitoring reports will contain at least the following:

- Location map and representational drawing.
- Historic description of project, including dates of plant installation, current year of monitoring, and restatement of goals, objectives, and performance standards.
- Description of monitoring methods.
- Documentation of plant cover and overall development of plant communities.
- Assessment of non-native, invasive plant species and recommendations for management.
- Photographs from permanent photo points.
- Summary of maintenance and contingency measures proposed for the next season and completed for the past season.

CONTINGENCY PLAN

If the performance standards are not being met during the 5-year monitoring period, contingency measures will be implemented to achieve the standard by the next monitoring season. The contingency measures utilized will depend on the failure of the plants or maintenance activities and will include but are not limited to replacement of dead plants (with the same or a similar species) when the survival rate standard is not met, addition of plants when the yearly percent cover standard is not met, and more intensive maintenance if the invasive plant cover exceeds 10 percent. All contingency actions will be undertaken only after consulting and gaining approval from the BIDCD. The applicant will be required to complete a contingency plan that describes (1) the causes of failure, (2) proposed corrective actions, (3) a schedule for completing corrective actions, and (4) whether additional maintenance and monitoring are necessary.

NO-NET-LOSS ASSESSMENT

The proposed impacts to the wetland buffer will be mitigated by improving the mowed grass and blackberry areas within the onsite buffer, which covers the entire property. Typically, buffer mitigation is conducted at a 1:1 ratio and considered sufficient because the impact and mitigation areas are equal. The mitigation plan calls for 6,200 square feet of wetland and buffer improvement in compensation for the total impact area of 6,186 square feet. The buffer plan proposes to remove invasive blackberry thickets east of Wetland B to allow installation of native plants and installation of native trees and shrubs within the mowed grass areas within the buffers of Wetlands A, B, and D. Removal of blackberry will likely reveal native species, which will be supplemented by the installed native plants.

The proposed mitigation plan will result in no-net-loss of buffer function because native trees and shrubs will be installed within the mowed grassy areas.

- The plan proposes installation of trees, high and low shrubs that are both deciduous and evergreen, and ferns to improve species diversity as well as vertical and horizontal diversity (Granger et. al. 2005) within the upland buffer on this property. The plan intends to both provide a protective barrier between the house and wetlands as well as core habitat for species using the upland and wetland areas (Hruby 2013).
- Mock orange and snowberry were selected because they spread quickly and form dense thickets that can reduce intrusion by humans and pets.
- Mock orange, Indian plum, and Oregon grape were selected because they have potential to provide food sources for local birds and small mammals.
- Vine maple and black hawthorn are proposed to create a low tree/high shrub layer within the future forested buffer.
- Evergreen plants are included in the planting plan to provide year-round vegetative coverage.
 - Sitka spruce and Douglas fir are proposed to increase tree species diversity by introducing conifer species to the buffer.
 - Evergreen huckleberry, Oregon grape, and sword fern are included to increase the low stature, understory vegetation that provides year-round cover.
 - Oregon grape and sword fern are proposed for within the buffer portion of the sewer line restoration along with two vine maples.
- The area of wetland impacted by the sewer line will be planted with slough sedge because it is a common understory species within forested wetlands, and it thrive in shady places. The project will avoid trees and because shrubs will recover naturally, shrub species are not included in the restoration plant list.

Because the mitigation plan proposes development of a higher quality wetland buffer by removing invasives and planting natives (Ecology 2018), it will result in no-net-loss of buffer function. The proposed mitigation will increase the function of the buffer and has been designed to reduce intrusion by humans and pets. A split-rail fence will be constructed along the edge of the building setback to limit onsite access to the wetland and buffer as well as to demarcate the limits of the onsite critical areas.

CUMULATIVE IMPACTS

This property is 1.03-acre in size and as mentioned previously is completely encumbered by wetlands and buffer. There is residential development on all sides except the north where Spargur Loop Road is located. The proposed house is in the only onsite clearing and all the onsite wetlands will remain in their current condition. The driveway from Spargur Loop Road runs between Wetlands A and D. It was constructed many years ago and has been maintained for access to this property. Because the driveway is existing, it will not result in new impact, cumulative, direct, or indirect-to the environment of this area. Although a house and detached garage is proposed on the property, it will be small and impact 6,186 square feet of buffer, which is about 5 percent of the property, so the new impact will not be significant. There will in fact be more forested buffer when the mitigation area, which totals 6,200 square feet, is developing and result in greater quantity and quality of forested buffer than exists at this time.

LIMITATIONS

ELS bases this report's determinations on standard scientific methodology and best professional judgment. In our opinion, local, state, and federal regulatory agencies should agree with our determinations. However, the information contained in this report should be considered preliminary and used at your own risk until it has been approved in writing by the appropriate regulatory agencies. ELS is not responsible for the impacts of any changes in environmental standards, practices, or regulations after the date of this report.

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Washington State Department of Ecology. July 2018. Modified from Appendix 8-C: *Guidance on Buffers and Ratios for Western Washington Wetlands in Washington State Volume 2* – Protecting and Managing Wetlands Ecology Publication No. 05-06-008.

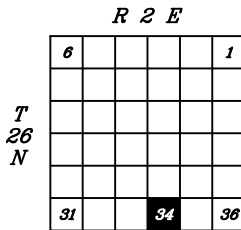
FIGURES & PHOTOPLATES

WASHINGTON



47.6956° Latitude
-122.5258° Longitude

LOCATION MAP



PROJECT VICINITY MAP

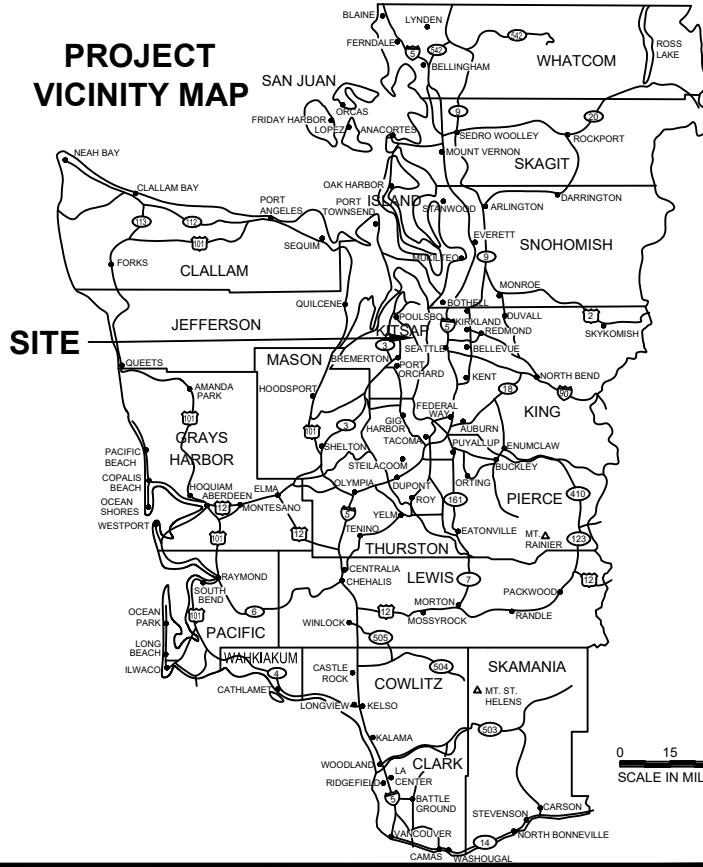


Figure 1

VICINITY MAP
Spargur Loop Delineation

Emily Kroman
City of Bainbridge Island, Kitsap County, WA
Section 34, Township 26N, Range 2E, W.M.

DATE: 9/24/19

DWN: JLL

REQ. BY:

PRJ. MGR: JB

CHK:

PROJECT NO:
2758.01

1157 3rd Ave., Suite 220A
Longview, WA 98632

Phone: (360) 578-1371

Fax: (360) 414-9305

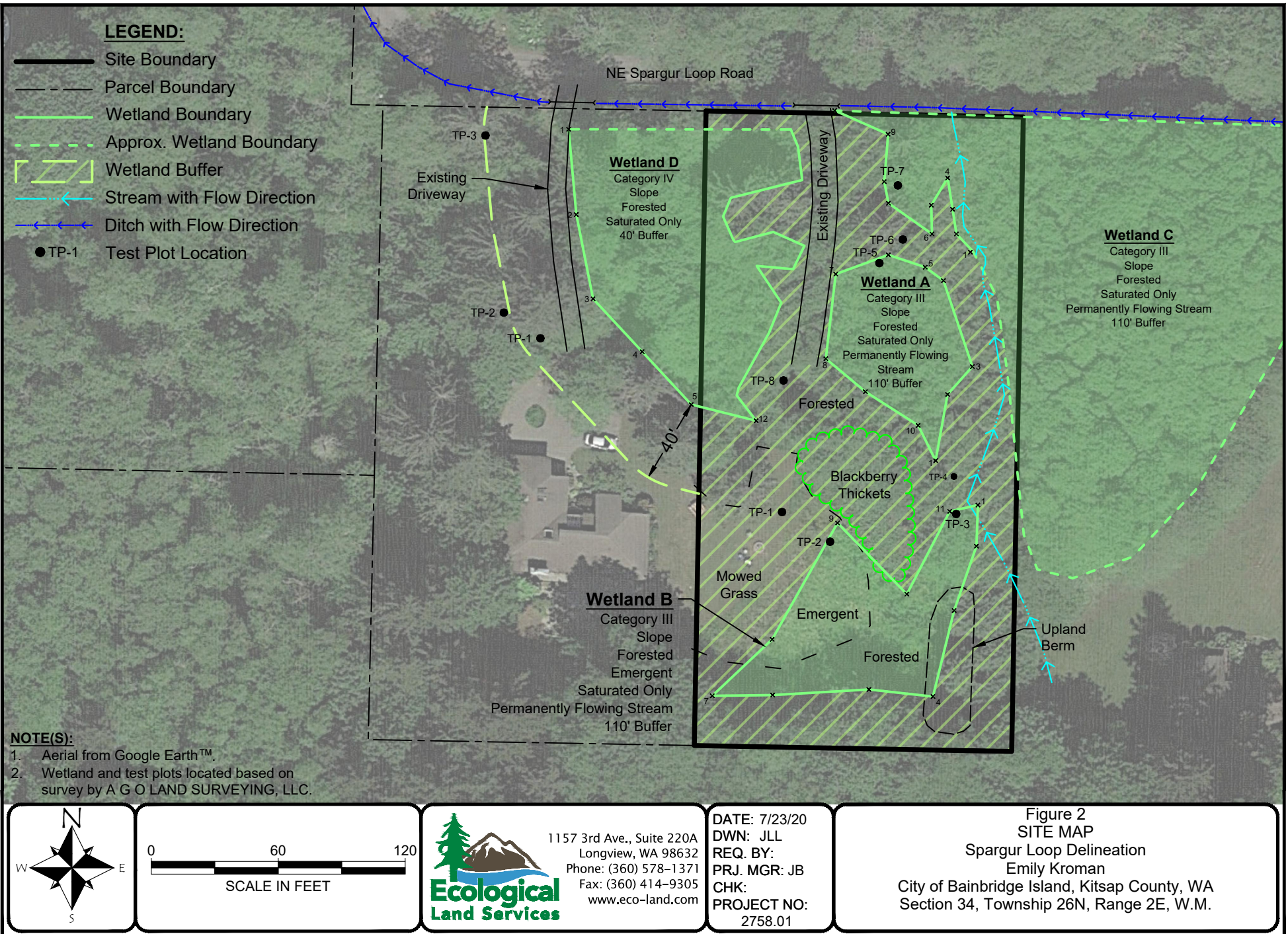
www.eco-land.com

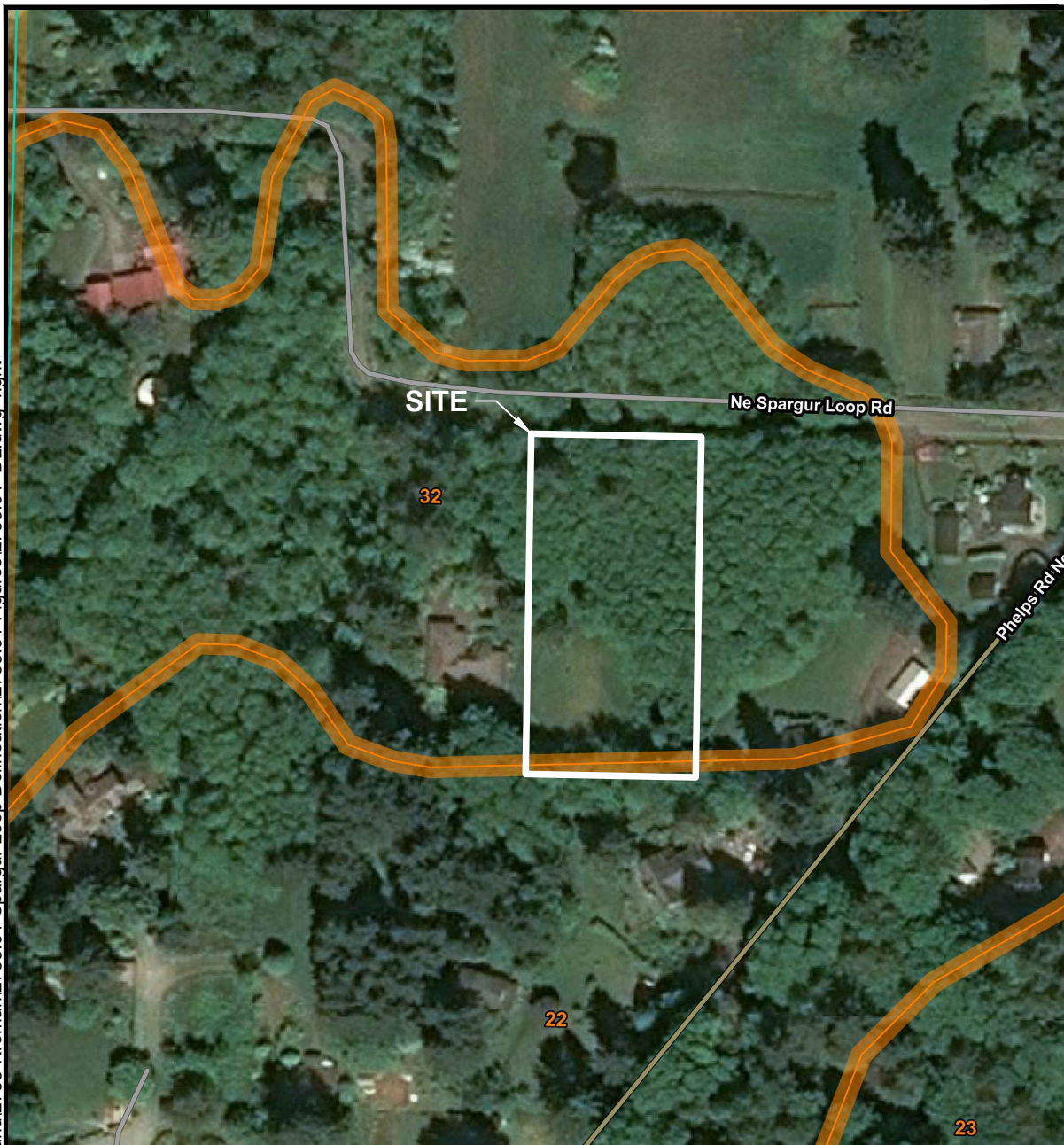


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SCALE IN FEET





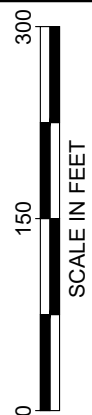
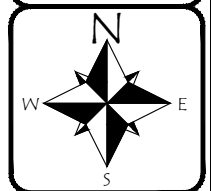


LEGEND:

- 22** Kapowsin gravelly ashy loam, 0 to 6 percent slopes. Not hydric.
- 32** McKenna gravelly loam. Hydric.

NOTE(S):

1. Map provided on-line by NRCS at web address:
<http://websoilsurvey.nrcs.usda.gov/app/>



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Figure 4
SOIL SURVEY MAP
Spargur Loop Delineation
Emily Kroman
City of Bainbridge Island, Kitsap County, WA
Section 34, Township 26N, Range 2E, W.M.



No mapped wetlands indicated onsite by US Fish & Wildlife Service.

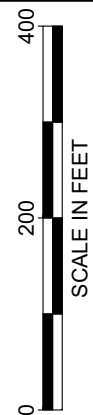
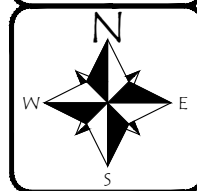
LEGEND:

 Freshwater Pond

PEMC Palustrine, unconsolidated bottom, permanently flooded.

NOTE(S):

1. Map provided on-line by US Fish & Wildlife Service at web address: <http://www.fws.gov/wetlands/data/index.html>



SCALE IN FEET



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Figure 5

NATIONAL WETLANDS INVENTORY MAP
Spargur Loop Delineation
Emily Kroman
City of Bainbridge Island, Kitsap County, WA
Section 34, Township 26N, Range 2E, W.M.

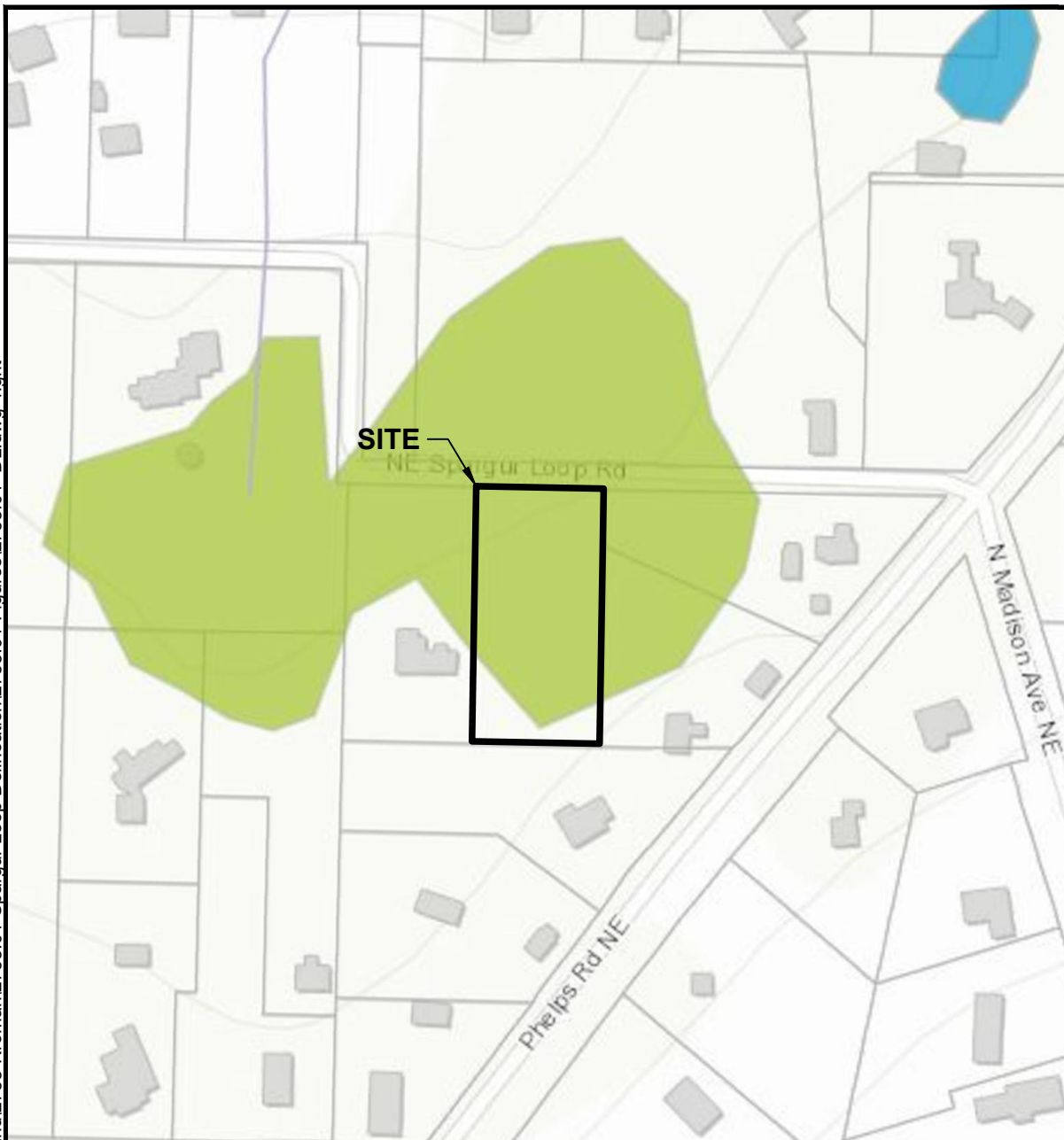


Figure 6
BAINBRIDGE ISLAND CRITICAL AREAS MAP
Spargur Loop Delineation
Emily Kroman
City of Bainbridge Island, Kitsap County, WA
Section 34, Township 26N, Range 2E, W.M.

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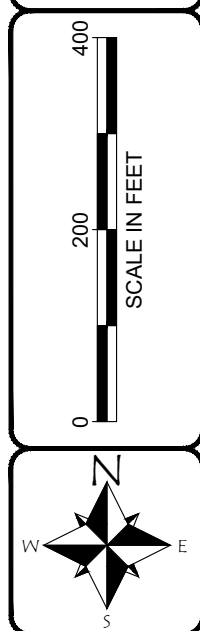
Ecological Land Services

LEGEND:

<u>Wetlands</u>			<u>Streams</u>			<u>FEMA Flood Hazard</u>		
	Delineated			Fish			A = Low Flood Risk	
	No Delineation			Non-Fish			AE = High Flood Risk	
	Not a Wetland			Non-Fish Perennial			VE = High Flood Risk	
	<u>Shoreline</u>			Non-Fish Seasonal			Kitsap County Parcels	

NOTE(S):

1. Map provided on-line by the City of Bainbridge Island at web address:
<https://cityofbi.maps.arcgis.com/home/index.html>



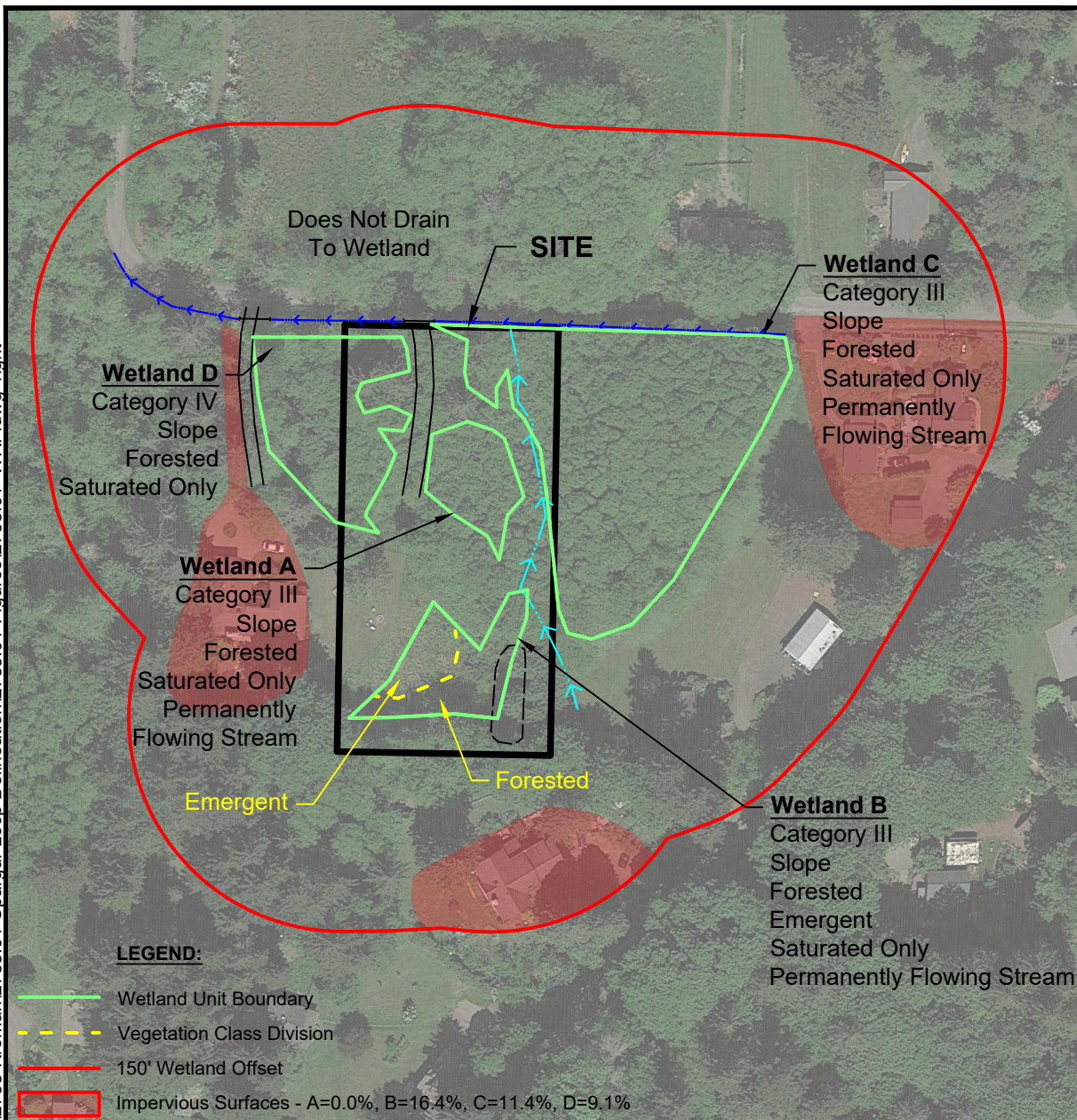


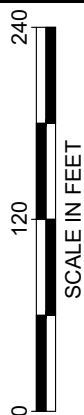
Figure 7
WETLAND RATING FIGURE-150' OFFSET
Spargur Loop Delineation
Emily Kroman
City of Bainbridge Island, Kitsap County, WA
Section 34, Township 26N, Range 2E, W.M.

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Rating Question	Description	Wetland A	Wetland B	Wetland C	Wetland D
S 1.3	Plant cover of trees, shrubs and herbs	Dense, uncut, woody plants > 1/2 of the area	Dense, uncut, woody plants > 1/2 of the area	Dense, uncut, woody plants > 1/2 of the area	Dense, uncut, woody plants > 1/2 of the area
S 2.1	Boundary of area w/in 150' of the wetland-land uses that generate pollutants	<10% of the area within 150' in land uses that generate pollutants	>10% of the area within 150' in land uses that generate pollutants	>10% of the area within 150' in land uses that generate pollutants	<10% of the area within 150' in land uses that generate pollutants
S 4.1	Characteristics of slowing water flow	<90% of area has dense, uncut, rigid vegetation	<90% of area has dense, uncut, rigid vegetation	<90% of area has dense, uncut, rigid vegetation	<90% of area has dense, uncut, rigid vegetation
S 5.1	Boundary of area w/in 150' of the wetland-land uses that generate excess runoff	<25% of area within 150 feet upslope in land uses or cover that generates excess runoff	<25% of area within 150 feet upslope in land uses or cover that generates excess runoff	<25% of area within 150 feet upslope in land uses or cover that generates excess runoff	<25% of area within 150 feet upslope in land uses or cover that generates excess runoff
H 1.1	Cowardin Plant Classes	Forested, with three layers	Emergent and forested, with three layers	Forested, with three layers	Forested, with three layers
H 1.2	Hydroperiods	Saturated only, permanently flowing stream	Saturated only, permanently flowing stream	Saturated only, permanently flowing stream	Saturated only
H 1.4	Interspersion of habitats	No interspersion of habitats	Low interspersion of habitat	No interspersion of habitats	No interspersion of habitats



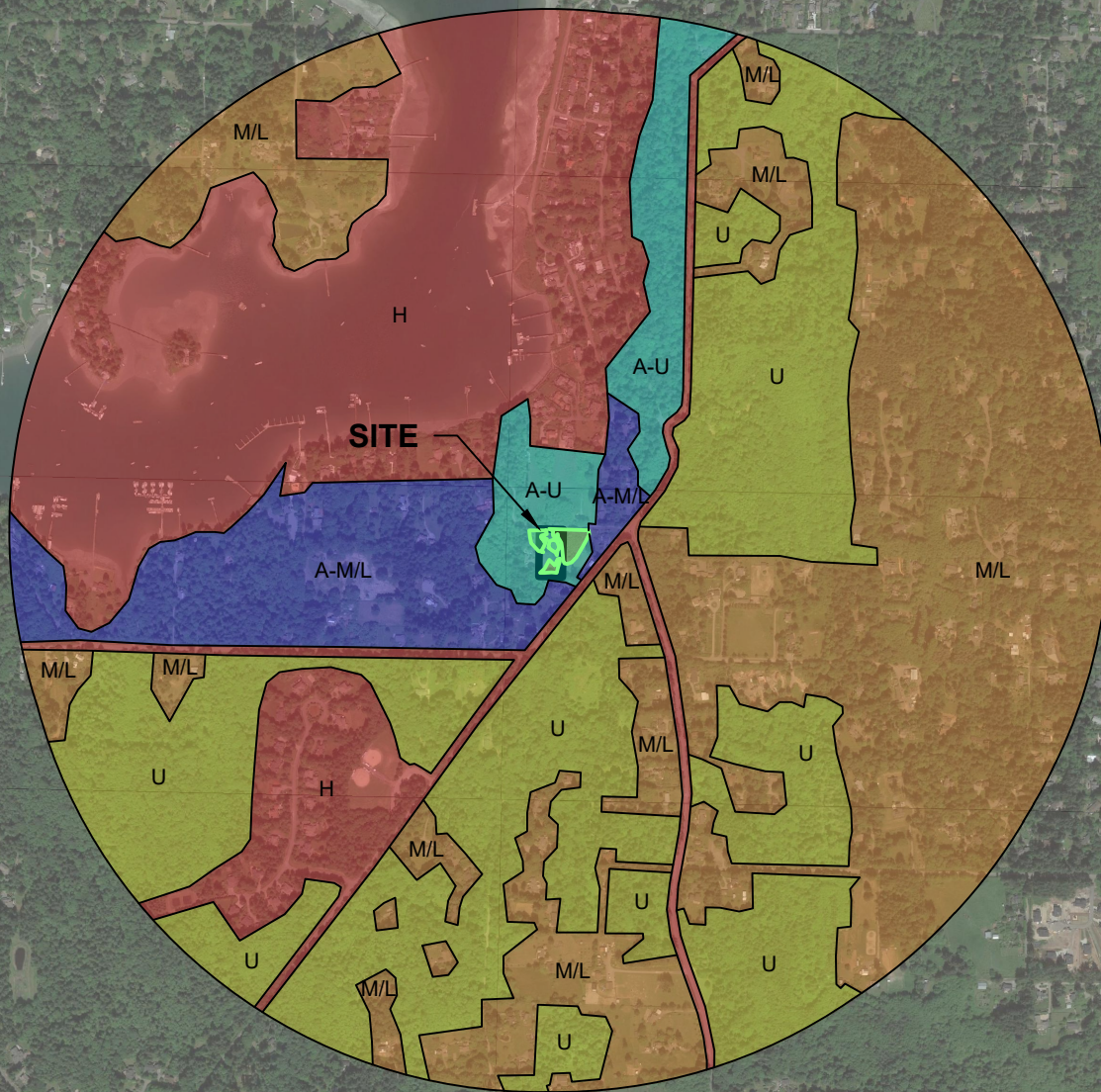
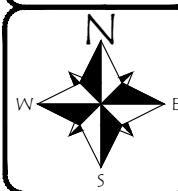


Figure 8
WETLAND RATING FIGURE-1 KM OFFSET
Spargur Loop Delineation
Emily Kroman
City of Bainbridge Island, Kitsap County, WA
Section 34, Township 26N, Range 2E, W.M.

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LEGEND:

- Site Boundary
- Wetland Unit Boundary

H2.1 Accessible Habitat

A-U	A-U (04.0%)
A-M/L	A-M/L (07.1%)

H2.2 Undisturbed Habitat

U	U (26.9%)
M/L	M/L (32.5%)

H2.3 Land Use Intensity

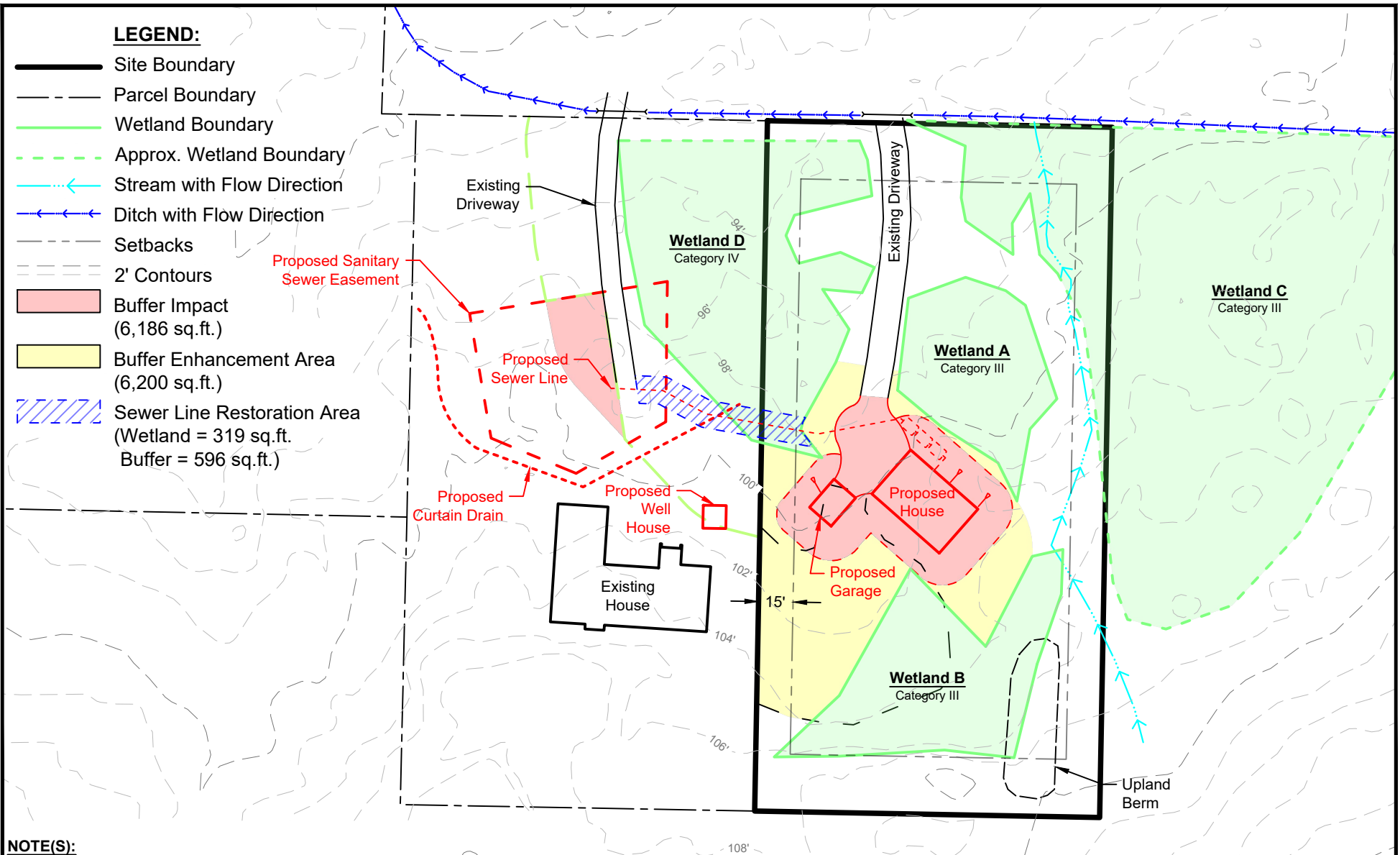
H	H (29.5%)
---	-----------

H 2.1. Accessible Habitat Equation

$$\% \text{ [A-U] habitat } 04.0\% + [(\% \text{ [A-M/L] intensity land uses})/2] 03.6\% = 07.6\%$$

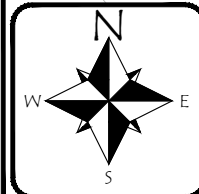
H 2.2. Total Undisturbed Habitat Equation

$$\% \text{ [A-U] } + \% \text{ [U] habitat } 30.9\% + [(\% \text{ [A-M/L] } + \% \text{ [M/L] land uses})/2] 19.8\% = 50.7\%$$



NOTE(S):

1. Contours derived from Lidar dated 07/03/2015.



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Figure 9
BUFFER MITIGATION OVERVIEW
Spargur Loop Delineation
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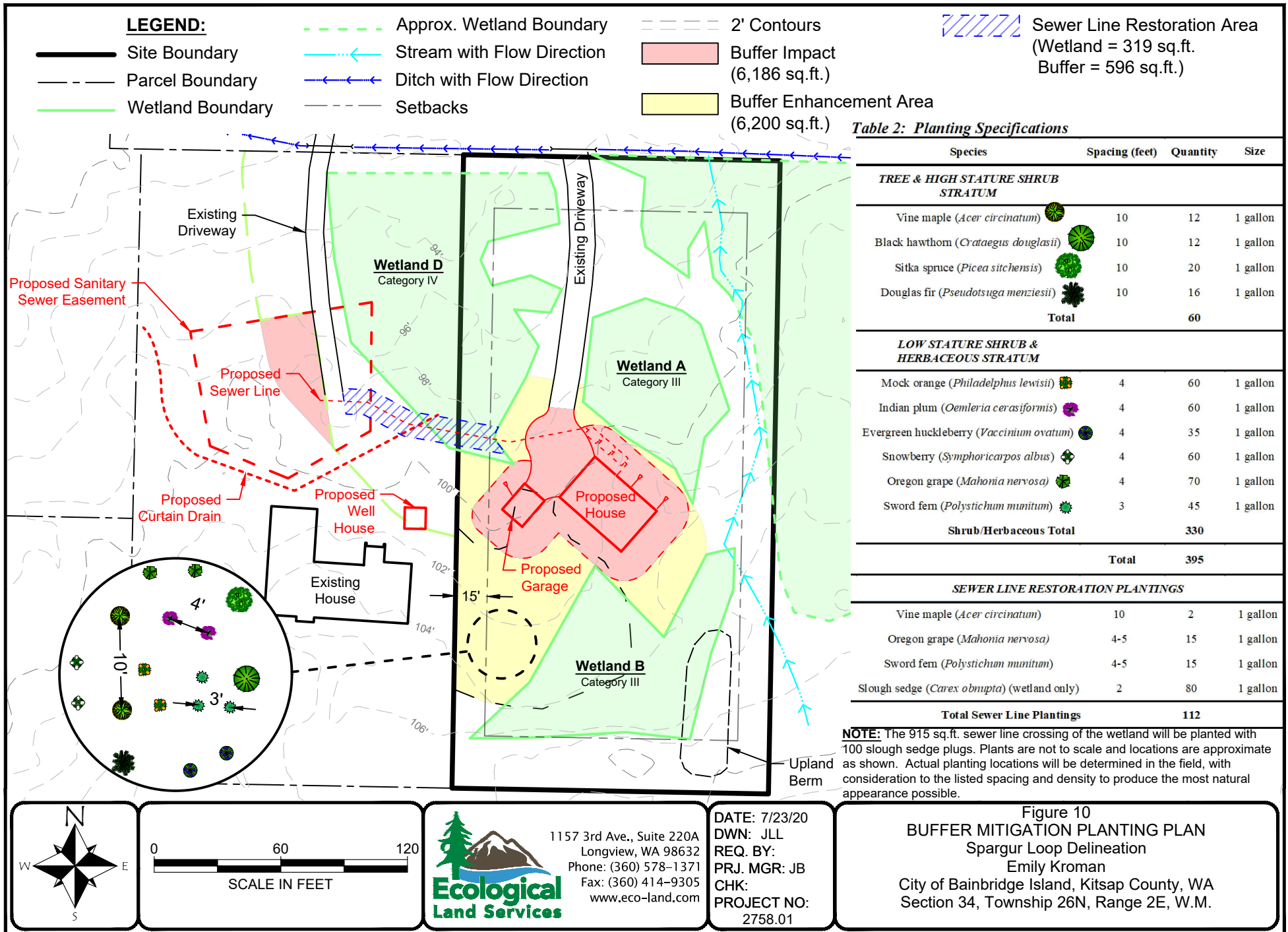




Photo 1 was taken near the southwest corner of the property and looks northwesterly at the neighboring home.



Photo 2 was taken from the same location as Photo 1 and looks north along the west property line. The future homesite will be situated near the west line in the clearing to the right.



Photo 3 was taken from the same location as Photos 1 and 2 northeasterly across the emergent portion of Wetland B. Enhancement of the buffer as well as the wetland is proposed to compensate for the house within the buffer.



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Photoplate 1
Project Name: Spargur Loop
Property
Client: Justin Huguet & Emily
Kroman
Kitsap County, Washington



Photo 4 was taken from the same location as Photos 1, 2, and 3 (Photoplate 1) and looks easterly along the south property line. Dense blackberries beneath the red alder canopy dominate this area.



Photo 5 was taken from about midway along the south property line. It looks westerly back toward the home offsite to the west.



Photo 6 was taken from the same location as Photo 5 and looks northwesterly across Wetland B. The tree on the right has fallen from the forest along south boundary of Wetland B.



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Photoplate 2
Project Name: Spargur Loop
Property
Client: Justin Huguet & Emily
Kroman
Kitsap County, Washington



Photo 7 was taken from the same location as Photos 5 and 6 (Photoplate 2). This photo looks northeasterly toward the east end of Wetland B. The fallen tree is more easily seen in this photo.



Photo 8 was taken from the north end of the existing driveway. It looks south toward the future building site, which is proposed in the sunny area in the background.



Photo 9 was taken from the same location as Photo 8 and looks northerly along the driveway. Spargur Loop Road is in the sunny area in the background.



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PROJ. #: 2758.01

Photoplate 3
Project Name: Spargur Loop
Property
Client: Justin Huguet & Emily
Kroman
Kitsap County, Washington



Photo 10 was taken of the area where Test Plot 1 was conducted. It is located in the proposed homesite area. This area was upland because of the dry soils and lack of wetland hydrology indicators. Hydrology was present in the other wetlands in contrast to this area.



Photo 11 was taken of the soil hole completed at Test Plot 1. It demonstrates the lack of wetland hydrology in contrast to the delineated wetlands all of which contained surface water or a shallow water table.



Photo 12 was taken of the area where Test Plot 2 was conducted. This area is similar to the area sampled at Test Plot 1 with regard to vegetation, but the soil exhibited a gleyed layer and a shallow water table. This area was determined to be part of Wetland B because there were positive indicators present for all three wetland parameters.



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Photoplate 4
Project Name: Spargur Loop
Property
Client: Justin Huguet & Emily
Kroman
Kitsap County, Washington



Photo 13 was taken from the existing driveway and looks southeasterly into Wetland A. This wetland is forested and dominated by red alder in the canopy and salmonberry in the shrub layer. There was surface water in portions of this wetland with a shallow water table throughout.



Photo 14 was taken of the north end of Wetland A. It looks westerly across the end near a pink wetland boundary flag and an orange test plot flag (in the lower left corner).



Photo 15 was taken from the same location as Photo 14 and looks southerly into Wetland A.



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Photoplate 5
Project Name: Spargur Loop
Property
Client: Justin Huguet & Emily
Kroman
Kitsap County, Washington



Photo 16 was taken of the area of Wetland A where Test Plot 5 was conducted. The orange test plot flag was placed just above several skunk cabbages growing through the dense ivy cover.



Photo 17 was taken of the upland area where Test Plot 6 was conducted. This upland forest lies between the north end of Wetland A and the western tip of Wetland C.



Photo 18 was taken of the area of Wetland C where Test Plot 7 was conducted.



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PROJ. #: 2758.01

Photoplate 6
Project Name: Spargur Loop
Property
Client: Justin Huguet & Emily
Kroman
Kitsap County, Washington

APPENDIX A

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

Project Site: Spargur Loop Property City/County: Bainbridge/Kitsap Sampling Date: 7/6/18
 Applicant/Owner: Justin Hugeot Emily Kroman State: WA Sampling Point: TP 1
 Investigator(s): J. Bartlett K. Lacey Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: 47.6953835156049 Long: -122.52568890727 Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: This property is located on the south side of Spargur Loop Road and slopes up from the road to the south. It is currently undeveloped and composed of forest and maintained lawn with four individual wetlands and a small stream. Test Plot 1 is located in the mowed lawn area to document the absence of wetland conditions.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x1 = _____ FACW species _____ x2 = _____ FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% = _____, 20% = _____	_____	= Total Cover		
Herb Stratum (Plot size: 10' diameter)				
1. <u>mowed grasses*</u>	<u>50</u>	<u>yes</u>	<u>FAC</u>	
2. <u>Ranunculus repens</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>	
3. <u>Lamium amplexicaule</u>	<u>20</u>	<u>yes</u>	<u>FACU</u>	
4. <u>Hypochaeris radicata</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>37.5</u> , 20% = <u>15</u>	<u>75</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>25</u>				

Remarks: The hydrophytic vegetation criterion is met in this area because there is greater than 50% dominance by FAC species.

SOILSampling Point: TP1**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		
0-12	2.5Y 3/3	100	_____	_____	_____	_____	fi sa loam	_____
12-16	2.5Y 4/2	95	10YR 4/6	5	M	M	loam	compacted
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	fi - fine
_____	_____	_____	_____	_____	_____	_____	_____	sa - sandy
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☐ No ☒

Remarks: This profile does not meet any of the hydric soil indicators because the depleted matrix begins greater than 10 inches below the surface.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?** Yes ☐ No ☒

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

Remarks: Hydrology was not present during the field visit and there was no evidence of wetland hydrology.

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

Project Site: Spargur Loop Property City/County: Bainbridge/Kitsap Sampling Date: 7/6/18
 Applicant/Owner: Justin Hugeot Emily Kroman State: WA Sampling Point: TP 2
 Investigator(s): J. Bartlett K. Lacey Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: 47.6953464105507 Long: -122.52559535234 Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: This property is located on the south side of Spargur Loop Road and slopes up from the road to the south. It is currently undeveloped and composed of forest and maintained lawn with four individual wetlands and a small stream. Test Plot 2 is located in the mowed lawn area of Wetland B.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100%</u> (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: _____)					
1. _____	_____	_____	_____	Prevalence Index worksheet:	
2. _____	_____	_____	_____	Total % Cover of:	Multiply by:
3. _____	_____	_____	_____	OBL species _____	x1 = _____
4. _____	_____	_____	_____	FACW species _____	x2 = _____
5. _____	_____	_____	_____	FAC species _____	x3 = _____
50% = _____, 20% = _____	_____	= Total Cover		FACU species _____	x4 = _____
Herb Stratum (Plot size: 10' diameter)				UPL species _____	x5 = _____
1. <u>mowed grasses*</u>	<u>50</u>	<u>yes</u>	<u>FAC</u>	Column Totals: _____ (A)	_____ (B)
2. <u>Ranunculus repens</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>	Prevalence Index = B/A = _____	
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
4. _____	_____	_____	_____	<input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. _____	_____	_____	_____	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹	
7. _____	_____	_____	_____	<input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	<input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹	
9. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
10. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
11. _____	_____	_____	_____		
50% = <u>35</u> , 20% = <u>14</u>	<u>70</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Woody Vine Stratum (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>30</u>					

Remarks: The hydrophytic vegetation criterion is met in this area because there is greater than 50% dominance by FAC species.

SOILSampling Point: TP2**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		
0-4	10YR 3/2	100	_____	_____	_____	_____	sa si loam	_____
4-12	10GY 5/1	85	7.5YR 4/6	15	C	PL	clay	compacted & Gley page 1
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	fi - fine
_____	_____	_____	_____	_____	_____	_____	_____	sa - sandy
_____	_____	_____	_____	_____	_____	_____	_____	si - silt

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☒ No ☐

Remarks: This profile has a gleyed layer below a dark surface so meets the criteria for hydric soil indicator F2.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): surface soil**Wetland Hydrology Present?** Yes ☒ No ☐

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

Remarks: Hydrology was present as soil saturation so the wetland hydrology criterion is met.

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

Project Site: Spargur Loop Property City/County: Bainbridge/Kitsap Sampling Date: 7/6/18
 Applicant/Owner: Justin Hugeot Emily Kroman State: WA Sampling Point: TP 3
 Investigator(s): J. Bartlett K. Lacey Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: 47.6953955317313 Long: -122.52535942595 Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: This property is located on the south side of Spargur Loop Road and slopes up from the road to the south. It is currently undeveloped and composed of forest and maintained lawn with four individual wetlands and a small stream. Test Plot 3 is located at the northeastern tip of Wetland B where forested vegetation dominates.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	30	yes	FAC	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>7</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71%</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>15</u> , 20% = <u>6</u>	30	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20' diameter)				Prevalence Index worksheet:
1. <u><i>Rubus spectabilis</i></u>	30	yes	FAC	
2. <u><i>Rubus armeniacus</i></u>	15	yes	FAC	OBL species _____ x1 = _____
3. <u><i>Sambucus racemosa</i></u>	10	no	FACU	FACW species _____ x2 = _____
4. _____	_____	_____	_____	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = <u>27.5</u> , 20% = <u>11</u>	55	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 10' diameter)				Column Totals: _____ (A) _____ (B)
1. <u><i>Polystichum munitum</i></u>	5	yes	FACU	Prevalence Index = B/A = _____
2. <u><i>Athyrium cyclosorum</i></u>	5	yes	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. <u><i>Equisetum arvense</i></u>	5	yes	FAC	
4. <u><i>Tellima grandiflora</i></u>	5	yes	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>10</u> , 20% = <u>4</u>	20	= Total Cover		
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>80</u>				

Remarks: The hydrophytic vegetation criterion is met in this area because there is greater than 50% dominance by FAC species.

SOILSampling Point: TP3**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		
0-16	10YR 2/1	100	_____	_____	_____	_____	muck	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: This profile meets hydric soil indicators A1 and A4 because of the organic soil conditions and emitted hydrogen sulfide odor.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☒ No ☐ Depth (inches): 12Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 8**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Hydrology was present as soil saturation so the wetland hydrology criterion is met.

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

Project Site: Spargur Loop Property City/County: Bainbridge/Kitsap Sampling Date: 7/6/18
 Applicant/Owner: Justin Hugeot Emily Kroman State: WA Sampling Point: TP 4
 Investigator(s): J. Bartlett K. Lacey Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: 47.6954345052446 Long: -122.52536057355 Datum: NAV83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: This property is located on the south side of Spargur Loop Road and slopes up from the road to the south. It is currently undeveloped and composed of forest and maintained lawn with four individual wetlands and a small stream. Test Plot 4 is located in the upland area west of the stream and between the southern point of Wetland A and the northern point of Wetland B. This area is forested with high shrub and herbaceous layers below the red alder trees..		

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	<u>35</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>17.5</u> , 20% = <u>7</u>	<u>35</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20' diameter)				Prevalence Index worksheet:
1. <u><i>Rubus spectabilis</i></u>	<u>20</u>	<u>yes</u>	<u>FAC</u>	
2. <u><i>Ilex aquifolium</i></u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	OBL species _____ x1 = _____
3. _____	_____	_____	_____	FACW species _____ x2 = _____
4. _____	_____	_____	_____	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = <u>15</u> , 20% = <u>6</u>	<u>30</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 10' diameter)				Column Totals: _____ (A) _____ (B)
1. <u><i>Tellima grandiflora</i></u>	<u>30</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____
2. <u><i>Polystichum munitum</i></u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>20</u> , 20% = <u>8</u>	<u>40</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>60</u>				

Remarks: The hydrophytic vegetation criterion is not met because there is less than 50% dominance by FAC species.

SOILSampling Point: TP4**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		
0-12	10YR 3/3	100	_____	_____	_____	_____	loam	_____
12-16	10YR 4/3	100	_____	_____	_____	_____	loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: The soil profile does not meet any of the hydric soil indicators because there are high matrix chromas in each soil layer.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**

Yes

☐

No

☒

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

Remarks: Hydrology was not present during the field visit and there was no evidence of wetland hydrology.

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

Project Site: Spargur Loop Property City/County: Bainbridge/Kitsap Sampling Date: 7/6/18
 Applicant/Owner: Justin Hugeot Emily Kroman State: WA Sampling Point: TP 5
 Investigator(s): J. Bartlett K. Lacey Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: 47.6957088981865 Long: -122.52551256006 Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: This property is located on the south side of Spargur Loop Road and slopes up from the road to the south. It is currently undeveloped and composed of forest and maintained lawn with four individual wetlands and a small stream. Test Plot 5 is located at the northern tip of Wetland A, which is dominated by forested vegetation with a mixed herbaceous layer.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. <u><i>Alnus rubra</i></u>	<u>25</u>	<u>yes</u>	<u>FAC</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)	
4. _____	_____	_____	_____		
50% = <u>12.5</u> , 20% = <u>5</u>	<u>25</u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: 20' diameter)					
1. <u><i>Rubus spectabilis</i></u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	Prevalence Index worksheet:	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____	
4. _____	_____	_____	_____	OBL species _____ x1 = _____	
5. _____	_____	_____	_____	FACW species _____ x2 = _____	
50% = <u>7.5</u> , 20% = <u>3</u>	<u>15</u>	= Total Cover		FAC species _____ x3 = _____	
Herb Stratum (Plot size: 10' diameter)					
1. <u><i>Lysichiton americanum</i></u>	<u>10</u>	<u>yes</u>	<u>OBL</u>	FACU species _____ x4 = _____	
2. <u><i>Athyrium cyclosorum</i></u>	<u>10</u>	<u>yes</u>	<u>FAC</u>	UPL species _____ x5 = _____	
3. <u><i>Equisetum arvense</i></u>	<u>5</u>	<u>no</u>	<u>FAC</u>	Column Totals: _____ (A) _____ (B)	
4. <u><i>Polystichum munitum</i></u>	<u>5</u>	<u>no</u>	<u>FACU</u>	Prevalence Index = B/A = _____	
5. <u><i>Rubus ursinus</i></u>	<u>5</u>	<u>no</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
50% = <u>17.5</u> , 20% = <u>7</u>	<u>35</u>	= Total Cover			
Woody Vine Stratum (Plot size: 20' diameter)					
1. <u><i>Hedera helix</i></u>	<u>75</u>	<u>yes</u>	<u>FACU</u>		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____		
50% = <u>37.5</u> , 20% = <u>15</u>	<u>75</u>	= Total Cover			
% Bare Ground in Herb Stratum <u>80</u>					

Remarks: The hydrophytic vegetation criterion is met in this area because there is greater than 50% dominance by FAC species.

SOILSampling Point: TP 5**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		
0-16	10YR 2/1	100	_____	_____	_____	_____	muck	dry conditions were observed
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☒ No ☐

Remarks: This profile meets hydric soil indicators A1 because of the organic soil conditions.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?** Yes ☒ No ☐

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

Remarks: Hydrology was not present during the field visit but there were indicators of seasonal hydrology that include sparsely vegetated concave surface.

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

Project Site: Spargur Loop Property City/County: Bainbridge/Kitsap Sampling Date: 7/6/18
 Applicant/Owner: Justin Hugeot Emily Kroman State: WA Sampling Point: TP 6
 Investigator(s): J. Bartlett K. Lacey Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: 47.6957401392768 Long: -122.52546861473 Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: This property is located on the south side of Spargur Loop Road and slopes up from the road to the south. It is currently undeveloped and composed of forest and maintained lawn with four individual wetlands and a small stream. Test Plot 6 is located north of Wetland A and just south of Wetland C. It is acting as the paired plot with both wetlands. This area is forested with high shrub and herbaceous layers below the red alder trees..		

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	<u>20</u>	<u>yes</u>	<u>FAC</u>	
2. <u><i>Tsuga heterophylla</i></u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>8</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>37.5</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>15</u> , 20% = <u>6</u>	<u>30</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20' diameter)				Prevalence Index worksheet:
1. <u><i>Vaccinium parvifolium</i></u>	<u>25</u>	<u>yes</u>	<u>FACU</u>	
2. <u><i>Rubus spectabilis</i></u>	<u>10</u>	<u>yes</u>	<u>FAC</u>	OBL species _____ x1 = _____
3. <u><i>English laurel</i></u>	<u>10</u>	<u>yes</u>	<u>NL (UPL)</u>	FACW species _____ x2 = _____
4. <u><i>Ilex aquifolium</i></u>	<u>5</u>	<u>no</u>	<u>FACU</u>	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = <u>25</u> , 20% = <u>10</u>	<u>50</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 10' diameter)				Column Totals: _____ (A) _____ (B)
1. <u><i>Polystichum munitum</i></u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____
2. <u><i>Rubus ursinus</i></u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. <u><i>Equisetum arvense</i></u>	<u>5</u>	<u>yes</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>12.5</u> , 20% = <u>5</u>	<u>25</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>75</u>				

Remarks: The hydrophytic vegetation criterion is not met because there is less than 50% dominance by FAC species.

SOILSampling Point: TP 6**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		
0-12	10YR 2/2	100	_____	_____	_____	_____	silt loam	_____
12-16	10YR 4/1	100	_____	_____	_____	_____	gr lo	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	gr - gravelly	_____
_____	_____	_____	_____	_____	_____	_____	lo - loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☐ No ☒

Remarks: The soil profile does not meet any of the hydric soil indicators because there are no redoximorphic features in the depleted matrix layer in the subsurface layer.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**Yes ☐ No ☒

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

Remarks: Hydrology was not present during the field visit and there was no evidence of wetland hydrology.

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

Project Site: Spargur Loop Property City/County: Bainbridge/Kitsap Sampling Date: 7/6/18
 Applicant/Owner: Justin Hugeot Emily Kroman State: WA Sampling Point: TP 7
 Investigator(s): J. Bartlett K. Lacey Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: 47.6958102062641 Long: -122.52548045432 Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: This property is located on the south side of Spargur Loop Road and slopes up from the road to the south. It is currently undeveloped and composed of forest and maintained lawn with four individual wetlands and a small stream. Test Plot 7 is located in the west end of Wetland C where the vegetation is forested with a dense shrub layer.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Alnus rubra</i></u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>7.5</u> , 20% = <u>3</u>	<u>15</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20' diameter)				Prevalence Index worksheet:
1. <u><i>Rubus spectabilis</i></u>	<u>50</u>	<u>yes</u>	<u>FAC</u>	
2. <u><i>Ribes lacustre</i></u>	<u>5</u>	<u>no</u>	<u>FAC</u>	OBL species _____ x1 = _____
3. <u><i>Ilex aquifolium</i></u>	<u>5</u>	<u>no</u>	<u>NL (UPL)</u>	FACW species _____ x2 = _____
4. _____	_____	_____	_____	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = <u>7.530</u> , 20% = <u>12</u>	<u>60</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 10' diameter)				Column Totals: _____ (A) _____ (B)
1. <u><i>Lysichiton americanum</i></u>	<u>10</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = _____
2. <u><i>Athyrium cyclosorum</i></u>	<u>10</u>	<u>yes</u>	<u>FAC</u>	
3. <u><i>Rubus ursinus</i></u>	<u>10</u>	<u>no</u>	<u>FAC</u>	
4. <u><i>Tellima grandiflora</i></u>	<u>10</u>	<u>no</u>	<u>FACU</u>	
5. <u><i>Equisetum arvense</i></u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>22.5</u> , 20% = <u>9</u>	<u>45</u>	= Total Cover		
Woody Vine Stratum (Plot size: 20' diameter)				
1. <u><i>Hedera helix</i></u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
50% = <u>5</u> , 20% = <u>2</u>	<u>10</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>80</u>				
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: The hydrophytic vegetation criterion is met in this area because there is greater than 50% dominance by FAC and OBL species.

SOILSampling Point: TP 7**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		
0-14	10YR 2/1	100	_____	_____	_____	_____	si lo	dry conditions were observed
14-20	10YR 4/1	95	10YR 4/6	5	C	M	si lo	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	si - silt
_____	_____	_____	_____	_____	_____	_____	_____	lo - loam
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☒ No ☐

Remarks: This profile meets hydric soil indicator A12 because of the thick dark surface and depleted soil in the subsurface layer.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?** Yes ☒ No ☐

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

Remarks: Hydrology was not present during the field visit but there were indicators of seasonal hydrology that include sparsely vegetated concave surface.

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

Project Site: Spargur Loop Property City/County: Bainbridge/Kitsap Sampling Date: 7/6/18
 Applicant/Owner: Justin Hugeot Emily Kroman State: WA Sampling Point: TP 8
 Investigator(s): J. Bartlett K. Lacey Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: 47.6955541244335 Long: -122.52569162227 Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: This property is located on the south side of Spargur Loop Road and slopes up from the road to the south. It is currently undeveloped and composed of forest and maintained lawn with four individual wetlands and a small stream. Test Plot 8 is located east of Wetland A and within a portion of the existing driveway. This area is composed of a maintained grass and weed area.			

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x1 = _____ FACW species _____ x2 = _____ FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: 20' diameter)				
1. <u>Rubus armeniacus</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
50% = <u>5</u> , 20% = <u>2</u>	<u>10</u>	= Total Cover		
Herb Stratum (Plot size: 10' diameter)				
1. <u>Ranunculus repens</u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Juncus effusus</u>	<u>10</u>	<u>no</u>	<u>FACW</u>	
3. <u>Geum macrophyllum</u>	<u>5</u>	<u>no</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>27.5</u> , 20% = <u>11</u>	<u>55</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>75</u>				

Remarks: The hydrophytic vegetation criterion is met because there is greater than 50% dominance by FAC species.

SOILSampling Point: TP 8**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		
0-16	10YR 2/1	100	_____	_____	_____	_____	silt loam	_____
16-20	10YR 5/2	100	_____	_____	_____	_____	sandy loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	!
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☐ No ☒

Remarks: The soil profile does not meet any of the hydric soil indicators because there are no redoximorphic features in the depleted matrix layer in the subsurface layer.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**Yes ☐ No ☒

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

Remarks: Hydrology was not present during the field visit and there was no evidence of wetland hydrology.

APPENDIX B

Wetland name or number: A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 7/6/18

Rated by: J Bartlett Trained by Ecology? X Yes No Date of training: 11/2014

HGM Class used for rating: Slope Wetland has multiple HGM classes? Y X N

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map: Google Earth

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

1. Category of wetland based on FUNCTIONS

 Category I – Total score = 23 – 27

 Category II – Total score = 20 – 22

X Category III – Total score = 16 – 19

 Category IV – Total score = 9 – 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	H M <u>L</u>	H M <u>L</u>	H <u>M</u> L	
Landscape Potential	H M <u>L</u>	H <u>M</u> L	H <u>M</u> L	
Value	<u>H</u> M L	H <u>M</u> L	H <u>M</u> L	TOTAL
Score Based on Ratings	5	5	6	16

Score for each
function based
on three
ratings
(order of ratings
is not
important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,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
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	X

Wetland name or number: A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 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 303(d) listed waters in basin (from Ecology website)	D 3.1, D 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 #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (<i>can be added to another figure</i>)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
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 303(d) listed waters in basin (from Ecology website)	R 3.1	
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 #
Cowardin 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 (<i>can be added to another figure</i>)	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 303(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 #
Cowardin plant classes	H 1.1, H 1.4	2, 7
Hydroperiods	H 1.2	2, 7
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	2, 7
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	7
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	7
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	8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	11
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	11

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 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 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 outlet, if present, is higher than the interior of the wetland.*

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number: A

SLOPE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: <i>(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)</i> Slope is 1% or less points = 3 Slope is > 1%-2% points = 2 Slope is > 2%-5% points = 1 Slope is greater than 5% points = 0	2
S 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic <i>(use NRCS definitions)</i> : Yes = 3 No = 0	0
S 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. <i>Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i> Dense, uncut, herbaceous plants > 90% of the wetland area points = 6 Dense, uncut, herbaceous plants > ½ of area points = 3 Dense, woody, plants > ½ of area points = 2 Dense, uncut, herbaceous plants > ¼ of area points = 1 Does not meet any of the criteria above for plants points = 0	2
Total for S 1	Add the points in the boxes above 4

Rating of Site Potential If score is: 12 = H 6-11 = M X 0-5 = L

Record the rating on the first page

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources Yes = 1 No = 0	0
Total for S 2	Add the points in the boxes above 0

Rating of Landscape Potential If score is: 1-2 = M X 0 = L

Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 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	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i> Yes = 1 No = 0	0
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i> Yes = 2 No = 0	2
Total for S 3	Add the points in the boxes above 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: A

SLOPE WETLANDS

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

S 4.0. Does the site have the potential to reduce flooding and stream erosion?

S 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 > 1/8 in), or dense enough, to remain erect during surface flows.*

Dense, uncut, rigid plants cover > 90% of the area of the wetland	points = 1
All other conditions	points = 0

O

Rating of Site Potential If score is: **1 = M** **X** **0 = L**

Record the rating on the first page

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

S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0

1

Rating of Landscape Potential If score is: X 1 = M 0 = L

Record the rating on the first page

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

S 6.1. Distance to the nearest areas 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 redds)	points = 2
Surface flooding problems are in a sub-basin farther down-gradient	points = 1
No flooding problems anywhere downstream	points = 0

1

S 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

O

Total for S 6 Add the points in the boxes above

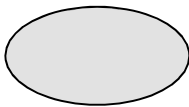
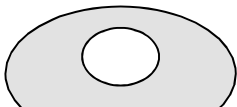

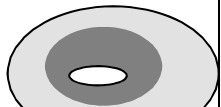


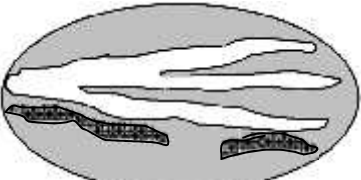
1

Rating of Value If score is: **2-4 = H** **X** **1 = M** **0 = L**

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

Wetland name or number: A

These questions apply to wetlands of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
<p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata 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 ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i></p> <p> <input type="checkbox"/> Aquatic bed 4 structures or more: points = 4 <input type="checkbox"/> Emergent 3 structures: points = 2 <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 <input checked="" type="checkbox"/> Forested (areas where trees have > 30% cover) 1 structure: points = 0 </p> <p><i>If the unit has a Forested class, check if:</i></p> <p> <input checked="" type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon </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 ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).</p> <p> <input type="checkbox"/> Permanently flooded or inundated 4 or more types present: points = 3 <input type="checkbox"/> Seasonally flooded or inundated 3 types present: points = 2 <input type="checkbox"/> Occasionally flooded or inundated 2 types present: points = 1 <input checked="" type="checkbox"/> Saturated only 1 type present: points = 0 </p> <p> <input checked="" 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"/> Lake Fringe wetland 2 points <input type="checkbox"/> Freshwater tidal wetland 2 points </p>	1
<p>H 1.3. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft². <i>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 Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i></p> <p> If you counted: > 19 species points = 2 5 - 19 species points = 1 < 5 species points = 0 </p>	1
<p>H 1.4. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> <div style="text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p>All three diagrams in this row are HIGH = 3 points</p>	0

Wetland name or number: A

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><u>X</u> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><u> </u> Standing snags (dbh > 4 in) within the wetland</p> <p><u>X</u> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends 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)</p> <p><u> </u> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><u>X</u> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><u>X</u> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>	4
<p>Total for H 1</p>	<p>Add the points in the boxes above</p> <p>7</p>

Rating of Site Potential If score is: 15-18 = H X 7-14 = M 0-6 = L *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 <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat <u>4.0</u> + [(% moderate and low intensity land uses)/2] <u>3.6</u> = <u>7.6</u>%</p> <p>If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>30.9</u> + [(% moderate and low intensity land uses)/2] <u>19.8</u> = <u>50.7</u>%</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	0
<p>Total for H 2</p>	<p>Add the points in the boxes above</p> <p>3</p>

Rating of Landscape Potential If score is: 4-6 = H X 1-3 = M < 1 = L *Record the rating on the first page*

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: points = 2
- 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 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, in a Shoreline Master Plan, or in a watershed plan
- Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1
- Site does not meet any of the criteria above points = 0

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

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, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

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 Stands:** 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 Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, 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*).
- **X Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas 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 slides and mine tailings. May be associated with cliffs.
- **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

Wetland name or number: A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt <div style="text-align: right;">Yes – Go to SC 1.1 No = Not an estuarine wetland</div>	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? <div style="text-align: right;">Yes = Category I No - Go to SC 1.2</div>	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, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <div style="text-align: right;">Yes = Category I No = Category II</div>	Cat. I 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? <div style="text-align: right;">Yes – Go to SC 2.2 No – Go to SC 2.3</div> SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? <div style="text-align: right;">Yes = Category I No = Not a WHCV</div> SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf <div style="text-align: right;">Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV</div> SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? <div style="text-align: right;">Yes = Category I No = Not a WHCV</div>	Cat. I
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? <div style="text-align: right;">Yes – Go to SC 3.3 No – Go to SC 3.2</div> SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? <div style="text-align: right;">Yes – Go to SC 3.3 No = Is not a bog</div> SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? <div style="text-align: right;">Yes = Is a Category I bog No – Go to SC 3.4</div> NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 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 Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? <div style="text-align: right;">Yes = Is a Category I bog No = Is not a bog</div>	Cat. I

Wetland name or number: A

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> 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/ac (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. — 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 (53 cm). <p style="text-align: right;">Yes = Category I <u>No</u> = Not a forested wetland for this section</p>	<p style="text-align: center;">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 sandbanks, 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 (<i>needs to be measured near the bottom</i>) <p style="text-align: right;">Yes – Go to SC 5.1 <u>No</u> = Not a wetland in a coastal lagoon</p> <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 aggressive, opportunistic plant species (see list of species on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p style="text-align: right;">Yes = Category I No = Category II</p>	<p style="text-align: center;">Cat. I</p> <p style="text-align: center;">Cat. II</p>
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate 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 Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 <p style="text-align: right;">Yes – Go to SC 6.1 <u>No</u> = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</p> <p style="text-align: right;">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 style="text-align: right;">Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</p> <p style="text-align: right;">Yes = Category III No = Category IV</p>	<p style="text-align: center;">Cat I</p> <p style="text-align: center;">Cat. II</p> <p style="text-align: center;">Cat. III</p> <p style="text-align: center;">Cat. IV</p>
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	

Wetland name or number: A

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Wetland name or number: B

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B Date of site visit: 7/6/18

Rated by: J Bartlett Trained by Ecology? X Yes No Date of training: 11/2014

HGM Class used for rating: Slope Wetland has multiple HGM classes? Y X N

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map: Google Earth

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

1. Category of wetland based on FUNCTIONS

 Category I – Total score = 23 – 27

 Category II – Total score = 20 – 22

X Category III – Total score = 16 – 19

 Category IV – Total score = 9 – 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	H <u>M</u> L	H M <u>L</u>	H <u>M</u> L	
Landscape Potential	H M <u>L</u>	H <u>M</u> L	H <u>M</u> L	
Value	<u>H</u> M L	H <u>M</u> L	H <u>M</u> L	TOTAL
Score Based on Ratings	6	5	6	17

Score for each
function based
on three
ratings
(order of ratings
is not
important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,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
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	X

Wetland name or number: B

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 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 303(d) listed waters in basin (from Ecology website)	D 3.1, D 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 #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (<i>can be added to another figure</i>)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
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 303(d) listed waters in basin (from Ecology website)	R 3.1	
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 #
Cowardin 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 (<i>can be added to another figure</i>)	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 303(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 #
Cowardin plant classes	H 1.1, H 1.4	2, 7
Hydroperiods	H 1.2	2, 7
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	2, 7
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	7
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	7
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	8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	11
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	11

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 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 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: B

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 outlet, if present, is higher than the interior of the wetland.*

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number: B

SLOPE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: <i>(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)</i> Slope is 1% or less points = 3 Slope is > 1%-2% points = 2 Slope is > 2%-5% points = 1 Slope is greater than 5% points = 0	2
S 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic <i>(use NRCS definitions)</i> : Yes = 3 No = 0	3
S 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. <i>Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i> Dense, uncut, herbaceous plants > 90% of the wetland area points = 6 Dense, uncut, herbaceous plants > ½ of area points = 3 Dense, woody, plants > ½ of area points = 2 Dense, uncut, herbaceous plants > ¼ of area points = 1 Does not meet any of the criteria above for plants points = 0	3
Total for S 1	Add the points in the boxes above 8

Rating of Site Potential If score is: 12 = H X 6-11 = M 0-5 = L

Record the rating on the first page

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources Yes = 1 No = 0	0
Total for S 2	Add the points in the boxes above 0

Rating of Landscape Potential If score is: 1-2 = M X 0 = L

Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 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	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i> Yes = 1 No = 0	0
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i> Yes = 2 No = 0	2
Total for S 3	Add the points in the boxes above 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: B

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 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. <i>Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows.</i> Dense, uncut, rigid plants cover > 90% of the area of the wetland <i>All other conditions</i>	0
points = 1	

Rating of Site Potential If score is: 1 = M X 0 = L

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	1

Rating of Landscape Potential If score is: X 1 = M 0 = L

Record the rating on the first page

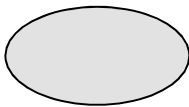
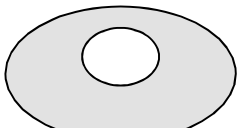
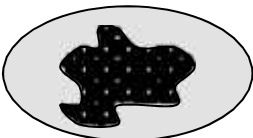
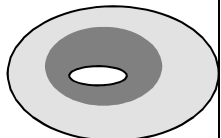
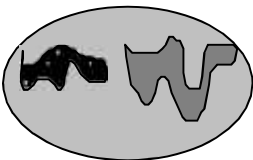
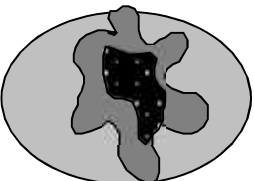
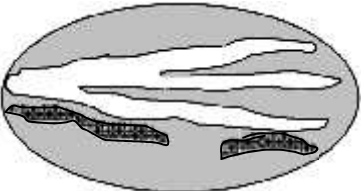
S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2 Surface flooding problems are in a sub-basin farther down-gradient points = 1 No flooding problems anywhere downstream points = 0	1
S 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	0
Total for S 6	1
Add the points in the boxes above	

Rating of Value If score is: 2-4 = H X 1 = M 0 = 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 - 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: <i>Indicators are Cowardin classes and strata 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 ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i></p> <p> <input type="checkbox"/> Aquatic bed 4 structures or more: points = 4 <input checked="" type="checkbox"/> Emergent 3 structures: points = 2 <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 <input checked="" type="checkbox"/> Forested (areas where trees have > 30% cover) 1 structure: points = 0 <i>If the unit has a Forested class, check if:</i> <input checked="" type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon </p>	2
<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 ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).</p> <p> <input type="checkbox"/> Permanently flooded or inundated 4 or more types present: points = 3 <input type="checkbox"/> Seasonally flooded or inundated 3 types present: points = 2 <input type="checkbox"/> Occasionally flooded or inundated 2 types present: points = 1 <input checked="" type="checkbox"/> Saturated only 1 type present: points = 0 <input checked="" 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"/> Lake Fringe wetland 2 points <input type="checkbox"/> Freshwater tidal wetland 2 points </p>	1
<p>H 1.3. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft². <i>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 Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i></p> <p> If you counted: > 19 species points = 2 5 - 19 species points = 1 < 5 species points = 0 </p>	1
<p>H 1.4. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> <div style="text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p>All three diagrams in this row are HIGH = 3points</p>	1

Wetland name or number: B

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><u>X</u> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><u> </u> Standing snags (dbh > 4 in) within the wetland</p> <p><u>X</u> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends 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)</p> <p><u> </u> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><u> </u> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><u>X</u> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>	3
<p>Total for H 1</p>	<p>Add the points in the boxes above</p> <p>8</p>

Rating of Site Potential If score is: 15-18 = H X 7-14 = M 0-6 = L *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 <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat <u>4.0</u> + [(% moderate and low intensity land uses)/2] <u>3.6</u> = <u>7.6</u>%</p> <p>If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>30.9</u> + [(% moderate and low intensity land uses)/2] <u>19.8</u> = <u>50.7</u>%</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	0
<p>Total for H 2</p>	<p>Add the points in the boxes above</p> <p>3</p>

Rating of Landscape Potential If score is: 4-6 = H X 1-3 = M < 1 = L *Record the rating on the first page*

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: points = 2
- 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 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, in a Shoreline Master Plan, or in a watershed plan
- Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1
- Site does not meet any of the criteria above points = 0

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

Wetland name or number: B

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

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 Stands:** 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 Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, 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*).
- **X Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas 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 slides and mine tailings. May be associated with cliffs.
- **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

Wetland name or number: B

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt <div style="text-align: right;">Yes – Go to SC 1.1 No = Not an estuarine wetland</div>	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? <div style="text-align: right;">Yes = Category I No - Go to SC 1.2</div>	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, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <div style="text-align: right;">Yes = Category I No = Category II</div>	Cat. I 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? <div style="text-align: right;">Yes – Go to SC 2.2 No – Go to SC 2.3</div> SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? <div style="text-align: right;">Yes = Category I No = Not a WHCV</div> SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf <div style="text-align: right;">Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV</div> SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? <div style="text-align: right;">Yes = Category I No = Not a WHCV</div>	Cat. I
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? <div style="text-align: right;">Yes – Go to SC 3.3 No – Go to SC 3.2</div> SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? <div style="text-align: right;">Yes – Go to SC 3.3 No = Is not a bog</div> SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? <div style="text-align: right;">Yes = Is a Category I bog No – Go to SC 3.4</div> NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 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 Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? <div style="text-align: right;">Yes = Is a Category I bog No = Is not a bog</div>	Cat. I

Wetland name or number: B

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> 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/ac (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. — 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 (53 cm). <p style="text-align: right;">Yes = Category I No = Not a forested wetland for this section</p>	<p style="text-align: center;">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 sandbanks, 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 (<i>needs to be measured near the bottom</i>) <p style="text-align: right;">Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p> <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 aggressive, opportunistic plant species (see list of species on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p style="text-align: right;">Yes = Category I No = Category II</p>	<p style="text-align: center;">Cat. I</p> <p style="text-align: center;">Cat. II</p>
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate 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 Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 <p style="text-align: right;">Yes – Go to SC 6.1 No = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</p> <p style="text-align: right;">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 style="text-align: right;">Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</p> <p style="text-align: right;">Yes = Category III No = Category IV</p>	<p style="text-align: center;">Cat I</p> <p style="text-align: center;">Cat. II</p> <p style="text-align: center;">Cat. III</p> <p style="text-align: center;">Cat. IV</p>
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	

Wetland name or number: B

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Wetland name or number: C

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland C Date of site visit: 7/6/18

Rated by: J Bartlett Trained by Ecology? X Yes No Date of training: 11/2014

HGM Class used for rating: Slope Wetland has multiple HGM classes? Y X N

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map: Google Earth

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

1. Category of wetland based on FUNCTIONS

 Category I – Total score = 23 – 27

 Category II – Total score = 20 – 22

X Category III – Total score = 16 – 19

 Category IV – Total score = 9 – 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	H M <u>L</u>	H M <u>L</u>	H M <u>L</u>	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	<u>H</u> M L	
Value	<u>H</u> M L	H <u>M</u> L	H <u>M</u> L	TOTAL
Score Based on Ratings	6	5	6	17

Score for each
function based
on three
ratings
(order of ratings
is not
important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,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
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	X

Wetland name or number: C

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 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 303(d) listed waters in basin (from Ecology website)	D 3.1, D 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 #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (<i>can be added to another figure</i>)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
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 303(d) listed waters in basin (from Ecology website)	R 3.1	
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 #
Cowardin 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 (<i>can be added to another figure</i>)	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 303(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 #
Cowardin plant classes	H 1.1, H 1.4	2, 7
Hydroperiods	H 1.2	2, 7
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	2, 7
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	7
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	7
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	8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	11
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	11

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 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 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: C

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 outlet, if present, is higher than the interior of the wetland.*

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number: C

SLOPE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: <i>(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)</i> Slope is 1% or less points = 3 Slope is > 1%-2% points = 2 Slope is > 2%-5% points = 1 Slope is greater than 5% points = 0	1
S 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic <i>(use NRCS definitions)</i> : Yes = 3 No = 0	0
S 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. <i>Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i> Dense, uncut, herbaceous plants > 90% of the wetland area points = 6 Dense, uncut, herbaceous plants > ½ of area points = 3 Dense, woody, plants > ½ of area points = 2 Dense, uncut, herbaceous plants > ¼ of area points = 1 Does not meet any of the criteria above for plants points = 0	2
Total for S 1	Add the points in the boxes above 3

Rating of Site Potential If score is: 12 = H 6-11 = M X 0-5 = L

Record the rating on the first page

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources Yes = 1 No = 0	0
Total for S 2	Add the points in the boxes above 1

Rating of Landscape Potential If score is: X 1-2 = M 0 = L

Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 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	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i> Yes = 1 No = 0	0
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i> Yes = 2 No = 0	2
Total for S 3	Add the points in the boxes above 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

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 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. <i>Stems of plants should be thick enough (usually > $\frac{1}{8}$ in), or dense enough, to remain erect during surface flows.</i> Dense, uncut, rigid plants cover > 90% of the area of the wetland <i>All other conditions</i>	0
points = 1	

Rating of Site Potential If score is: 1 = M X 0 = L

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? Yes = 1 No = 0	1

Rating of Landscape Potential If score is: X 1 = M 0 = L

Record the rating on the first page

S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas 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 redds) points = 2 Surface flooding problems are in a sub-basin farther down-gradient points = 1 No flooding problems anywhere downstream points = 0	1
S 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	0
Total for S 6	1
Add the points in the boxes above	

Rating of Value If score is: 2-4 = H X 1 = M 0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

Wetland name or number: C

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?

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 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

1

- | | |
|---|----------------------------------|
| <input type="checkbox"/> Aquatic bed | 4 structures or more: points = 4 |
| <input type="checkbox"/> Emergent | 3 structures: points = 2 |
| <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) | 2 structures: points = 1 |
| <input checked="" type="checkbox"/> Forested (areas where trees have > 30% cover) | 1 structure: points = 0 |

If the unit has a Forested class, check if:

- ☒ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

H 1.2. Hydroperiods

1

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

- | | |
|---|-------------------------------------|
| <input type="checkbox"/> Permanently flooded or inundated | 4 or more types present: points = 3 |
| <input type="checkbox"/> Seasonally flooded or inundated | 3 types present: points = 2 |
| <input type="checkbox"/> Occasionally flooded or inundated | 2 types present: points = 1 |
| <input checked="" type="checkbox"/> Saturated only | 1 type present: points = 0 |
| <input checked="" 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"/> Lake Fringe wetland | 2 points |
| <input type="checkbox"/> Freshwater tidal wetland | 2 points |

H 1.3. Richness of plant species

1

Count the number of plant species in the wetland that cover at least 10 ft².

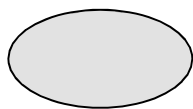
*Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. **Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

- | | |
|------------------------------|------------|
| If you counted: > 19 species | points = 2 |
| 5 - 19 species | points = 1 |
| < 5 species | points = 0 |

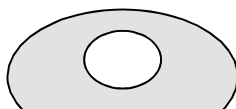
H 1.4. Interspersion of habitats

0

Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated 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.*



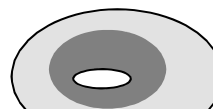
None = 0 points



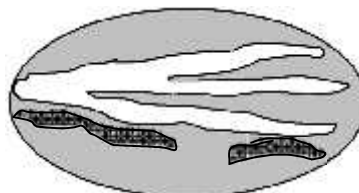
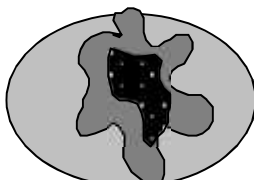
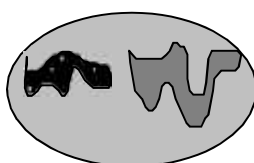
Low = 1 point



Moderate = 2 points



All three diagrams
in this row
are **HIGH** = 3points



Wetland name or number: C

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><u>X</u> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><u> </u> Standing snags (dbh > 4 in) within the wetland</p> <p><u>X</u> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends 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)</p> <p><u> </u> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><u> </u> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><u>X</u> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>	3
<p>Total for H 1</p>	<p>Add the points in the boxes above</p> <p>6</p>

Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L *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 <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat <u>4.0</u> + [(% moderate and low intensity land uses)/2] <u>3.6</u> = <u>7.6</u>%</p> <p>If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>30.9</u> + [(% moderate and low intensity land uses)/2] <u>19.8</u> = <u>50.7</u>%</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	0
<p>Total for H 2</p>	<p>Add the points in the boxes above</p> <p>3</p>

Rating of Landscape Potential If score is: 4-6 = H X 1-3 = M < 1 = L *Record the rating on the first page*

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: points = 2

- 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 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, in a Shoreline Master Plan, or in a watershed plan

Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1

Site does not meet any of the criteria above points = 0

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

Wetland name or number: C

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

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 Stands:** 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 Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, 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.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas 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 slides and mine tailings. May be associated with cliffs.
- **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

Wetland name or number: C

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt <div style="text-align: right;">Yes – Go to SC 1.1 No = Not an estuarine wetland</div>	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? <div style="text-align: right;">Yes = Category I No - Go to SC 1.2</div>	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, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <div style="text-align: right;">Yes = Category I No = Category II</div>	Cat. I 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? <div style="text-align: right;">Yes – Go to SC 2.2 No – Go to SC 2.3</div> SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? <div style="text-align: right;">Yes = Category I No = Not a WHCV</div> SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf <div style="text-align: right;">Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV</div> SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? <div style="text-align: right;">Yes = Category I No = Not a WHCV</div>	Cat. I
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? <div style="text-align: right;">Yes – Go to SC 3.3 No – Go to SC 3.2</div> SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? <div style="text-align: right;">Yes – Go to SC 3.3 No = Is not a bog</div> SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? <div style="text-align: right;">Yes = Is a Category I bog No – Go to SC 3.4</div> NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 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 Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? <div style="text-align: right;">Yes = Is a Category I bog No = Is not a bog</div>	Cat. I

Wetland name or number: C

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> 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/ac (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. — 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 (53 cm). <p style="text-align: right;">Yes = Category I No = Not a forested wetland for this section</p>	<p style="text-align: center;">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 sandbanks, 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 (<i>needs to be measured near the bottom</i>) <p style="text-align: right;">Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p> <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 aggressive, opportunistic plant species (see list of species on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p style="text-align: right;">Yes = Category I No = Category II</p>	<p style="text-align: center;">Cat. I</p> <p style="text-align: center;">Cat. II</p>
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate 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 Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 <p style="text-align: right;">Yes – Go to SC 6.1 No = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</p> <p style="text-align: right;">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 style="text-align: right;">Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</p> <p style="text-align: right;">Yes = Category III No = Category IV</p>	<p style="text-align: center;">Cat I</p> <p style="text-align: center;">Cat. II</p> <p style="text-align: center;">Cat. III</p> <p style="text-align: center;">Cat. IV</p>
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	

Wetland name or number: C

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Wetland name or number: D

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland D Date of site visit: 7/6/18

Rated by: J Bartlett Trained by Ecology? X Yes No Date of training: 11/2014

HGM Class used for rating: Slope Wetland has multiple HGM classes? Y X N

NOTE: Form is not complete without the figures requested (figures can be combined).

Source of base aerial photo/map: Google Earth

OVERALL WETLAND CATEGORY IV (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

 Category III – Total score = 16 – 19

X Category IV – Total score = 9 – 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
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 <u>M</u> L	H <u>M</u> L	
Value	<u>H</u> M L	H <u>M</u> L	H M <u>L</u>	TOTAL
Score Based on Ratings	5	5	4	14

Score for each
function based
on three
ratings
(order of ratings
is not
important)

9 = H,H,H

8 = H,H,M

7 = H,H,L

7 = H,M,M

6 = H,M,L

6 = M,M,M

5 = H,L,L

5 = M,M,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
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	X

Wetland name or number: D

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 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 303(d) listed waters in basin (from Ecology website)	D 3.1, D 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 #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (<i>can be added to another figure</i>)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
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 303(d) listed waters in basin (from Ecology website)	R 3.1	
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 #
Cowardin 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 (<i>can be added to another figure</i>)	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 303(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 #
Cowardin plant classes	H 1.1, H 1.4	2, 7
Hydroperiods	H 1.2	2, 7
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	2, 7
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	7
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	7
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	8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	11
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	11

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 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 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: 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 not flooding

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

NO – go to 7

YES – The wetland class is **Depressional**

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

NO – go to 8

YES – The wetland class is **Depressional**

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

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

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

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

Wetland name or number: D

SLOPE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
S 1.0. Does the site have the potential to improve water quality?	
S 1.1. Characteristics of the average slope of the wetland: <i>(a 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance)</i> Slope is 1% or less points = 3 Slope is > 1%-2% points = 2 Slope is > 2%-5% points = 1 Slope is greater than 5% points = 0	2
S 1.2. <u>The soil 2 in below the surface (or duff layer)</u> is true clay or true organic <i>(use NRCS definitions)</i> : Yes = 3 No = 0	0
S 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. <i>Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in.</i> Dense, uncut, herbaceous plants > 90% of the wetland area points = 6 Dense, uncut, herbaceous plants > ½ of area points = 3 Dense, woody, plants > ½ of area points = 2 Dense, uncut, herbaceous plants > ¼ of area points = 1 Does not meet any of the criteria above for plants points = 0	2
Total for S 1	Add the points in the boxes above 4

Rating of Site Potential If score is: 12 = H 6-11 = M X 0-5 = L

Record the rating on the first page

S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants? Yes = 1 No = 0	0
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1? Other sources Yes = 1 No = 0	0
Total for S 2	Add the points in the boxes above 0

Rating of Landscape Potential If score is: 1-2 = M X 0 = L

Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 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	0
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? <i>At least one aquatic resource in the basin is on the 303(d) list.</i> Yes = 1 No = 0	0
S 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? <i>Answer YES if there is a TMDL for the basin in which unit is found.</i> Yes = 2 No = 0	2
Total for S 3	Add the points in the boxes above 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: D

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	
S 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. <i>Stems of plants should be thick enough (usually > $\frac{1}{8}$ in), or dense enough, to remain erect during surface flows.</i> Dense, uncut, rigid plants cover > 90% of the area of the wetland All other conditions	0 points = 1 points = 0

Rating of Site Potential If score is: 1 = M X 0 = L

Record the rating on the first page

S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff? <div style="text-align: right;">Yes = 1 No = 0</div>	1

Rating of Landscape Potential If score is: X 1 = M 0 = L

Record the rating on the first page

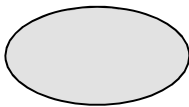
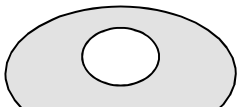

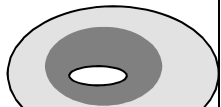


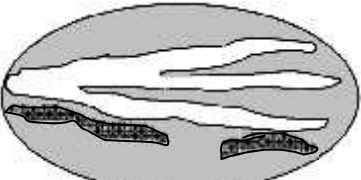
S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) points = 2 Surface flooding problems are in a sub-basin farther down-gradient points = 1 No flooding problems anywhere downstream points = 0	1
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? <div style="text-align: right;">Yes = 2 No = 0</div>	0
Total for S 6	Add the points in the boxes above 1

Rating of Value If score is: 2-4 = H X 1 = M 0 = L

Record the rating on the first page

NOTES and FIELD OBSERVATIONS:

Wetland name or number: D

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: <i>Indicators are Cowardin classes and strata 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 ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i></p> <p> <input type="checkbox"/> Aquatic bed 4 structures or more: points = 4 <input type="checkbox"/> Emergent 3 structures: points = 2 <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 <input checked="" type="checkbox"/> Forested (areas where trees have > 30% cover) 1 structure: points = 0 </p> <p><i>If the unit has a Forested class, check if:</i></p> <p> <input checked="" type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon </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 ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).</p> <p> <input type="checkbox"/> Permanently flooded or inundated 4 or more types present: points = 3 <input type="checkbox"/> Seasonally flooded or inundated 3 types present: points = 2 <input type="checkbox"/> Occasionally flooded or inundated 2 types present: points = 1 <input checked="" type="checkbox"/> Saturated only 1 type present: points = 0 </p> <p> <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"/> Lake Fringe wetland 2 points <input type="checkbox"/> Freshwater tidal wetland 2 points </p>	0
<p>H 1.3. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft². <i>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 Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i></p> <p> If you counted: > 19 species points = 2 5 - 19 species points = 1 < 5 species points = 0 </p>	1
<p>H 1.4. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> <div style="text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p>All three diagrams in this row are HIGH = 3 points</p>	0

Wetland name or number: D

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><u>X</u> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><u> </u> Standing snags (dbh > 4 in) within the wetland</p> <p><u>X</u> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends 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)</p> <p><u> </u> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><u> </u> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><u>X</u> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>	3
<p>Total for H 1</p>	<p>Add the points in the boxes above</p> <p>5</p>

Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L *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 <i>only habitat that directly abuts wetland unit</i>).</p> <p><i>Calculate:</i> % undisturbed habitat <u>4.0</u> + [(% moderate and low intensity land uses)/2] <u>3.6</u> = 7.6%</p> <p>If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	0
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat <u>30.9</u> + [(% moderate and low intensity land uses)/2] <u>19.8</u> = 50.7%</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	3
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	0
<p>Total for H 2</p>	<p>Add the points in the boxes above</p> <p>3</p>

Rating of Landscape Potential If score is: 4-6 = H X 1-3 = M < 1 = L *Record the rating on the first page*

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: points = 2
- 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 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, in a Shoreline Master Plan, or in a watershed plan
- Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1
- Site does not meet any of the criteria above points = 0

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

Wetland name or number: D

WDFW Priority Habitats

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf> or access the list from here: <http://wdfw.wa.gov/conservation/phs/list/>)

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 Stands:** 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 Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- **Old-growth/Mature forests:** Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, 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.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- **Cliffs:** Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- **Talus:** Homogenous areas 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 slides and mine tailings. May be associated with cliffs.
- **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

Wetland name or number: D

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt <div style="text-align: right;">Yes – Go to SC 1.1 No = Not an estuarine wetland</div>	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? <div style="text-align: right;">Yes = Category I No - Go to SC 1.2</div>	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, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. <div style="text-align: right;">Yes = Category I No = Category II</div>	Cat. I 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? <div style="text-align: right;">Yes – Go to SC 2.2 No – Go to SC 2.3</div> SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? <div style="text-align: right;">Yes = Category I No = Not a WHCV</div> SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasetsearch/wnhpwetlands.pdf <div style="text-align: right;">Yes – Contact WNHP/WDNR and go to SC 2.4 No = Not a WHCV</div> SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? <div style="text-align: right;">Yes = Category I No = Not a WHCV</div>	Cat. I
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? <div style="text-align: right;">Yes – Go to SC 3.3 No – Go to SC 3.2</div> SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? <div style="text-align: right;">Yes – Go to SC 3.3 No = Is not a bog</div> SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? <div style="text-align: right;">Yes = Is a Category I bog No – Go to SC 3.4</div> NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 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 Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? <div style="text-align: right;">Yes = Is a Category I bog No = Is not a bog</div>	Cat. I

Wetland name or number: D

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> 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/ac (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. — 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 (53 cm). <p style="text-align: right;">Yes = Category I No = Not a forested wetland for this section</p>	<p style="text-align: center;">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 sandbanks, 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 (<i>needs to be measured near the bottom</i>) <p style="text-align: right;">Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p> <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 aggressive, opportunistic plant species (see list of species on p. 100). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p style="text-align: right;">Yes = Category I No = Category II</p>	<p style="text-align: center;">Cat. I</p> <p style="text-align: center;">Cat. II</p>
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate 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 Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 <p style="text-align: right;">Yes – Go to SC 6.1 No = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?</p> <p style="text-align: right;">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 style="text-align: right;">Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?</p> <p style="text-align: right;">Yes = Category III No = Category IV</p>	<p style="text-align: center;">Cat I</p> <p style="text-align: center;">Cat. II</p> <p style="text-align: center;">Cat. III</p> <p style="text-align: center;">Cat. IV</p>
<p>Category of wetland based on Special Characteristics</p> <p>If you answered No for all types, enter "Not Applicable" on Summary Form</p>	

Wetland name or number: D

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APPENDIX C



May 15, 2020

Emily Kroman
Justin Huguet
9185 NE Spargur Loop Road
Bainbridge Island, WA 98110

Re: Septic system easement determination and discussion.

Dear Emily and Justin:

The City of Bainbridge Island (COBI) has requested a wetland determination for the proposed septic easement on the west side of your developed property. The determination is requested to confirm the absence of wetland in an area of potential hydric (wetland) soil. Data was collected at two of the soil logs at the south end and in a low point at the north end. The soil logs represent the location of the future drainfield and are located on the high point of the easement area. Data was collected on April 27, 2020 and is discussed in the following sections. The data was entered on the forms in Appendix A.

Data Discussion

Vegetation

The upland forest in which the septic system drainfield is proposed is dominated by bigleaf maple (*Acer macrophyllum*, FACU), western red cedar (*Thuja plicata*, FAC), western hemlock (*Tsuga heterophylla*, FACU), and cascara (*Frangula purshiana*, FAC) in the tree canopy. The shrub layer is moderately dense and dominated by Indian plum (*Oemleria cerasiformis*, FACU), salmonberry (*Rubus spectabilis*, FAC), red huckleberry (*Vaccinium parvifolium*, FACU), and holly (*Ilex aquifolium*, FACU), with lower percentages of red elderberry (*Sambucus racemosa*, FACU) and salal (*Gaultheria shallon*, FACU). The herbaceous layer is relatively sparse with sword fern (*Polystichum munitum*, FACU) and trailing blackberry (*Rubus ursinus*, FACU) having the highest cover with lower percentages of lady fern (*Athyrium cyclosorum*, FAC) and horsetail (*Equisetum arvense*, FAC) also present. English ivy (*Hedera helix*, FACU) dominates the ground. The hydrophytic vegetation criterion is not met within the septic system easement and at the north end of the property because there is less than 50 percent dominance by FAC species (Appendix A).

Soils

As referenced on the Natural Resources Conservation Service Web Soil Survey (NRCS 2019) website, McKenna gravelly loam (32) is mapped on the entire property and is part of a larger map unit (ELS 2020). McKenna gravelly loam is moderately deep, poorly drained over compacted glacial till. McKenna soil is classified as hydric (NRCS 2016).

The upland soil profiles consisted thick surface layers of gravelly sandy loam and silt loam (0 to 6 inches) that had dark brown (10YR 2/1 to 10YR 2/2) matrix chromas. The underlying layers consisted of gravelly sandy loam and silt loam with red to yellow red matrix chromas (10YR 3/6 to 10YR 4/3). Redoximorphic features consisting of concentrations within the matrix were present in the 10YR 4/3 soil matrix chroma but the matrix is not depleted so this profile has no indicators of hydric soil. These soil profiles do not meet any of the hydric soil indicators because chromas in the underlying layers are not considered depleted. The hydric soil criterion is therefore not met.

Hydrology

Water was not present in or around Test Plots 1 and 2 and there was no evidence of wetland hydrology because they are at the high point of the property. Evidence of surface water was present at Test Plot 3 and the soil surface layer was saturated, with no water table observed. Although wetland hydrology indicators are present, the vegetation was dominated by upland plant species (FACU) and the soil profile did not meet the hydric soil criterion. The presence of hydrology was likely due to rain events prior to the site visit, the position of this area at the lowest point of the property, and its proximity to the roadside ditch (along Spargur Loop Road). The wetland hydrology criterion is not met for any of the test plot areas.

Wetland D

Wetland D was identified during the delineation conducted for the RUE lot. It lies between the current driveway to 9185 Spargur Loop Road and the existing driveway path on the RUE lot (Figure 1). There is no room on the RUE lot for the septic system because of the extent of wetlands and buffers, which has necessitated designating a septic system easement on the adjacent property. The western boundary of Wetland D was delineated on April 27, 2020 to determine how much of the septic easement is proposed within the buffer. The flags were located using the OnX Hunt app on an iPhone and they were located on Figure 1. The wetland is rated a Category IV and requires a 40-foot buffer, which extends beyond the 9185 Spargur Loop driveway. The buffer appears to extend slightly into the drainfield area at Soil Log 3 and will require mitigation for 1,123 square feet of impact. The mitigation for the impact is included with the RUE requested for the property on which the home is proposed.

Conclusion

In conclusion, the septic system easement on the property at 9185 Spargur Loop Road, does not meet the wetland criterion because the area is dominated by upland plant species, the soils are bright red so are not hydric, and there was no evidence of wetland hydrology. Even though wetlands were not identified within the easement, a portion of the easement lies within the 40-foot buffer of Wetland D. The buffer extends across the existing driveway and lies within 1,123 square feet of the septic system easement. Mitigation for this area of the easement will be included in the RUE proposal currently under review.

If there are additional questions, please contact me at joanne@eco-land.com or 360-674-7186.

Sincerely,

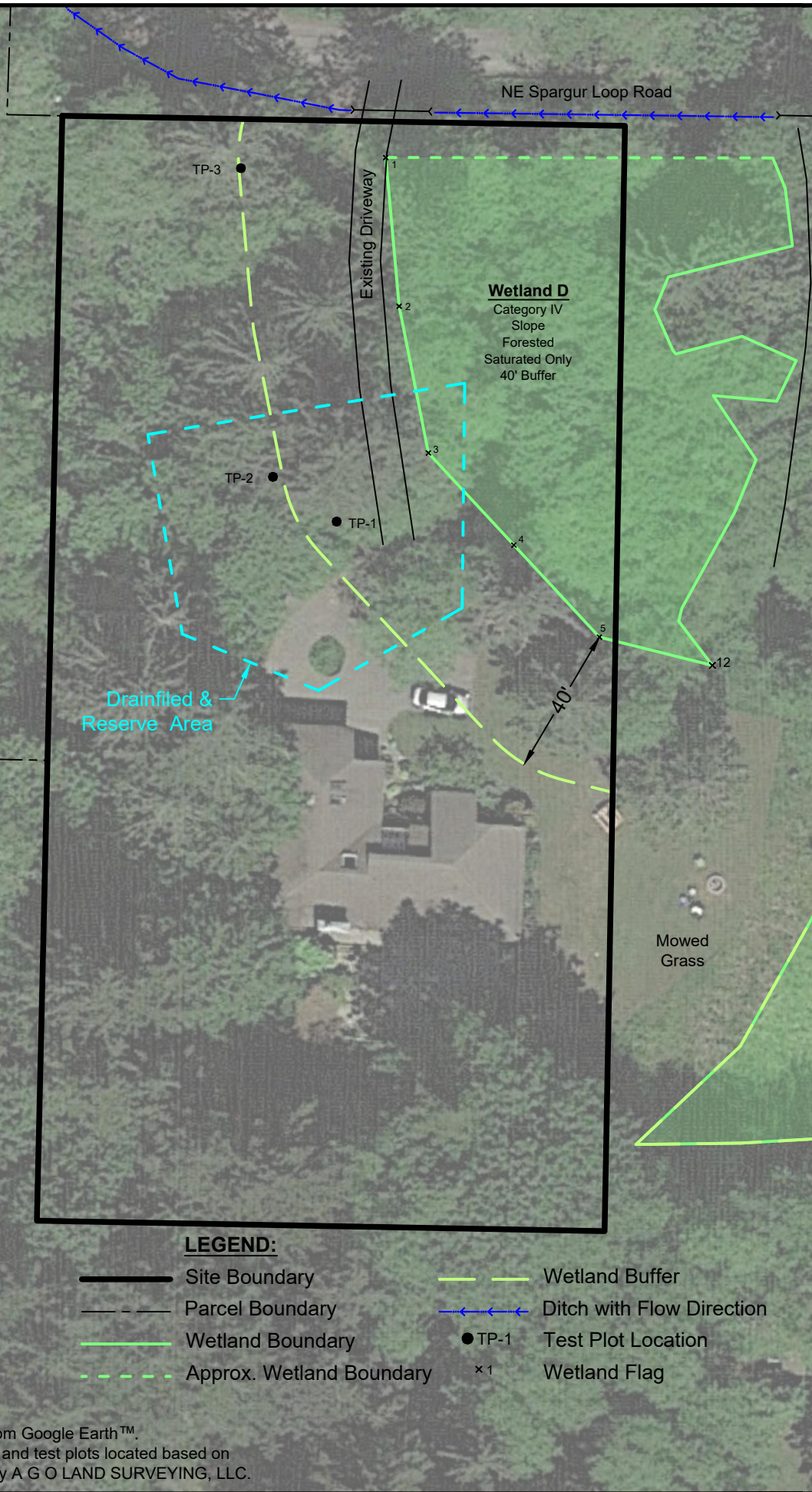


Joanne Bartlett, SPWS
Senior Biologist

Attachments

Figure 1-Site Map

Appendix A-Wetland Determination Data Forms

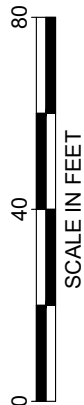


LEGEND:

- Site Boundary
- - - Parcel Boundary
- Wetland Boundary
- - - Approx. Wetland Boundary
- Wetland Buffer
- Ditch with Flow Direction
- TP-1 Test Plot Location
- x1 Wetland Flag

NOTE(S):

1. Aerial from Google Earth™.
2. Wetland and test plots located based on survey by A G O LAND SURVEYING, LLC.



DATE: 7/22/20
DWN: JLL
REQ. BY:
PRJ. MGR: JB
CHK:
PROJECT NO:
2758.01

Figure 1 SITE MAP

Spargur Loop Delineation
Emily Kroman
City of Bainbridge Island, Kitsap County, WA
Section 34, Township 26N, Range 2E, W.M.

APPENDIX A

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

Project Site: Spargur Loop Property-Septic Easement City/County: Bainbridge/Kitsap Sampling Date: 4/27/20
 Applicant/Owner: Justin Hugelot Emily Kroman State: WA Sampling Point: TP 1
 Investigator(s): J. Bartlett Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The property at 9185 NE Spargur Loop Road is developed and the forested area along the west edge will serve as the drainfield for the adjacent property for which an RUE is being obtained. There is no room on the RUE property because of the extent of wetlands and buffers. This area is composed of upland forest that slopes gradually down to the north and northwest. The driveway lies between the easement and Wetland D. Test Plot 1 was conducted at Soil Log 3.		

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Acer macrophyllum</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	
2. <u>Frangula purshiana</u>	<u>5</u>	<u>yes</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>29</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>10</u> , 20% = <u>4</u>	<u>20</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20' diameter)				Prevalence Index worksheet:
1. <u>Oemleria cerasiformis</u>	<u>20</u>	<u>yes</u>	<u>FACU</u>	
2. <u>Rubus spectabilis</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>	OBL species _____ x1 = _____
3. <u>Ilex aquifolium</u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	FACW species _____ x2 = _____
4. <u>Sambucus racemosa</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	FAC species _____ x3 = _____
5. <u>Rubus armeniacus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	FACU species _____ x4 = _____
50% = <u>25</u> , 20% = <u>10</u>	<u>50</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 10' diameter)				Column Totals: _____ (A) _____ (B)
1. <u>Polystichum munitum</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____
2. <u>Rubus ursinus</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>15</u> , 20% = <u>6</u>	<u>30</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>70</u>				

Remarks: The hydrophytic vegetation criterion is not met because there is less than 50% dominance by FAC species.

SOIL

Sampling Point: TP 1

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		
0-6	10YR 2/2	100	_____	_____	_____	_____	gr sa lo	_____
6-16	10YR 3/6	100	_____	_____	_____	_____	gr sa lo	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	gr - gravelly
_____	_____	_____	_____	_____	_____	_____	_____	sa - sandy
_____	_____	_____	_____	_____	_____	_____	_____	lo - loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☐ No ☒

Remarks: The soil profile does not meet any of the hydric soil indicators because the soil matrix chromas are not depleted.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**Yes ☐ No ☒

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

Remarks: Hydrology was not present during the field visit and there was no evidence of wetland hydrology.

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

Project Site: Spargur Loop Property-Septic Easement City/County: Bainbridge/Kitsap Sampling Date: 4/27/20
 Applicant/Owner: Justin Hugelot Emily Kroman State: WA Sampling Point: TP 2
 Investigator(s): J. Bartlett Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The property at 9185 NE Spargur Loop Road is developed and the forested area along the west edge will serve as the drainfield for the adjacent property for which an RUE is being obtained. There is no room on the RUE property because of the extent of wetlands and buffers. This area is composed of upland forest that slopes gradually down to the north and northwest. The driveway lies between the easement and Wetland D. Test Plot 1 was conducted at Soil Log 1.		

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Thuja plicata</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	
2. <u>Tsuga heterophylla</u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>14</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>12.5</u> , 20% = <u>5</u>	<u>25</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20' diameter)				Prevalence Index worksheet:
1. <u>Vaccinium parvifolium</u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	
2. <u>Gaultheria shallon</u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	OBL species _____ x1 = _____
3. _____	_____	_____	_____	FACW species _____ x2 = _____
4. _____	_____	_____	_____	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = <u>10</u> , 20% = <u>4</u>	<u>20</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 10' diameter)				Column Totals: _____ (A) _____ (B)
1. <u>Polystichum munitum</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____
2. <u>Rubus ursinus</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>15</u> , 20% = <u>6</u>	<u>30</u>	= Total Cover		
Woody Vine Stratum (Plot size: 20' diameter)				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. <u>Hedera helix</u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
50% = <u>5</u> , 20% = <u>2</u>	<u>10</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>70</u>				

Remarks: The hydrophytic vegetation criterion is not met because there is less than 50% dominance by FAC species.

SOILSampling Point: TP 2**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		
0-4	10YR 2/2	100	_____	_____	_____	_____	gr sa lo	_____
4-10	10YR 3/6	100	_____	_____	_____	_____	gr sa lo	_____
_____	_____	_____	_____	_____	_____	_____	_____	Tree root
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	gr - gravelly
_____	_____	_____	_____	_____	_____	_____	_____	sa - sandy
_____	_____	_____	_____	_____	_____	_____	_____	lo - loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☐ No ☒

Remarks: The soil profile does not meet any of the hydric soil indicators because the soil matrix chromas are not depleted.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)

- ☐ Water-Stained Leaves (B9)
(except MLRA 1, 2, 4A, and 4B)
☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Stunted or Stresses Plants (D1) **(LRR A)**
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**Yes ☐ No ☒

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

Remarks: Hydrology was not present during the field visit and there was no evidence of wetland hydrology.

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

Project Site: Spargur Loop Property-Septic Easement City/County: Bainbridge/Kitsap Sampling Date: 4/27/20
 Applicant/Owner: Justin Hugeot Emily Kroman State: WA Sampling Point: TP 3
 Investigator(s): J. Bartlett Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The property at 9185 NE Spargur Loop Road is developed and the forested area along the west edge will serve as the drainfield for the adjacent property for which an RUE is being obtained. There is no room on the RUE property because of the extent of wetlands and buffers. This area is composed of upland forest that slopes gradually down to the north and northwest. The driveway lies between the easement and Wetland D. Test Plot 3 was conducted at the north end of the forest.		

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Thuja plicata</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>43</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>7.5</u> , 20% = <u>3</u>	<u>15</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20' diameter)				Prevalence Index worksheet:
1. <u>Vaccinium parvifolium</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	
2. <u>Rubus spectabilis</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>	OBL species _____ x1 = _____
3. <u>Ilex aquifolium</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	FACW species _____ x2 = _____
4. _____	_____	_____	_____	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = <u>15</u> , 20% = <u>6</u>	<u>30</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 10' diameter)				Column Totals: _____ (A) _____ (B)
1. <u>Polystichum munitum</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____
2. <u>Athyrium cyclosorum</u>	<u>5</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. <u>Equisetum arvense</u>	<u>5</u>	<u>yes</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>12.5</u> , 20% = <u>5</u>	<u>25</u>	= Total Cover		
Woody Vine Stratum (Plot size: 20' diameter)				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. <u>Hedera helix</u>	<u>20</u>	<u>yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
50% = <u>10</u> , 20% = <u>4</u>	<u>20</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>75</u>				

Remarks: The hydrophytic vegetation criterion is not met because there is less than 50% dominance by FAC species.

SOIL

Sampling Point: TP 3

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		
0-6	10YR 2/1	100	_____	_____	_____	_____	silt loam	_____
6-16	10YR 4/3	95	10YR 4/6	5	C	M	gr silt loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	Tree root
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	gr - gravelly
_____	_____	_____	_____	_____	_____	_____	_____	sa - sandy
_____	_____	_____	_____	_____	_____	_____	_____	lo - loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☐ No ☒

Remarks: The soil profile does not meet any of the hydric soil indicators because the soil matrix chromas are not depleted.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☒ Sparsely Vegetated Concave Surface (B8)

- ☐ Water-Stained Leaves (B9)
(except MLRA 1, 2, 4A, and 4B)
☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Stunted or Stresses Plants (D1) **(LRR A)**
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**Yes ☒ No ☐

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

Remarks: Evidence of surface water present-this area is the lowest spot on the property and is adjacent to the ditch along Spargur Loop Road.

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

Project Site: Spargur Loop Property-Septic Easement City/County: Bainbridge/Kitsap Sampling Date: 4/27/20
 Applicant/Owner: Justin Hugelot Emily Kroman State: WA Sampling Point: TP 1
 Investigator(s): J. Bartlett Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The property at 9185 NE Spargur Loop Road is developed and the forested area along the west edge will serve as the drainfield for the adjacent property for which an RUE is being obtained. There is no room on the RUE property because of the extent of wetlands and buffers. This area is composed of upland forest that slopes gradually down to the north and northwest. The driveway lies between the easement and Wetland D. Test Plot 1 was conducted at Soil Log 3.		

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Acer macrophyllum</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	
2. <u>Frangula purshiana</u>	<u>5</u>	<u>yes</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>29</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>10</u> , 20% = <u>4</u>	<u>20</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20' diameter)				Prevalence Index worksheet:
1. <u>Oemleria cerasiformis</u>	<u>20</u>	<u>yes</u>	<u>FACU</u>	
2. <u>Rubus spectabilis</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>	OBL species _____ x1 = _____
3. <u>Ilex aquifolium</u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	FACW species _____ x2 = _____
4. <u>Sambucus racemosa</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	FAC species _____ x3 = _____
5. <u>Rubus armeniacus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	FACU species _____ x4 = _____
50% = <u>25</u> , 20% = <u>10</u>	<u>50</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 10' diameter)				Column Totals: _____ (A) _____ (B)
1. <u>Polystichum munitum</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____
2. <u>Rubus ursinus</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>15</u> , 20% = <u>6</u>	<u>30</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>70</u>				

Remarks: The hydrophytic vegetation criterion is not met because there is less than 50% dominance by FAC species.

SOIL

Sampling Point: TP 1

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		
0-6	10YR 2/2	100	_____	_____	_____	_____	gr sa lo	_____
6-16	10YR 3/6	100	_____	_____	_____	_____	gr sa lo	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	gr - gravelly
_____	_____	_____	_____	_____	_____	_____	_____	sa - sandy
_____	_____	_____	_____	_____	_____	_____	_____	lo - loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

- | |
|---|
| <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☐ No ☒

Remarks: The soil profile does not meet any of the hydric soil indicators because the soil matrix chromas are not depleted.

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**Yes ☐ No ☒

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

Remarks: Hydrology was not present during the field visit and there was no evidence of wetland hydrology.

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

Project Site: Spargur Loop Property-Septic Easement City/County: Bainbridge/Kitsap Sampling Date: 4/27/20
 Applicant/Owner: Justin Hugelot Emily Kroman State: WA Sampling Point: TP 2
 Investigator(s): J. Bartlett Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The property at 9185 NE Spargur Loop Road is developed and the forested area along the west edge will serve as the drainfield for the adjacent property for which an RUE is being obtained. There is no room on the RUE property because of the extent of wetlands and buffers. This area is composed of upland forest that slopes gradually down to the north and northwest. The driveway lies between the easement and Wetland D. Test Plot 1 was conducted at Soil Log 1.		

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Thuja plicata</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	
2. <u>Tsuga heterophylla</u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>14</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>12.5</u> , 20% = <u>5</u>	<u>25</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20' diameter)				Prevalence Index worksheet:
1. <u>Vaccinium parvifolium</u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	
2. <u>Gaultheria shallon</u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	OBL species _____ x1 = _____
3. _____	_____	_____	_____	FACW species _____ x2 = _____
4. _____	_____	_____	_____	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = <u>10</u> , 20% = <u>4</u>	<u>20</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 10' diameter)				Column Totals: _____ (A) _____ (B)
1. <u>Polystichum munitum</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____
2. <u>Rubus ursinus</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>15</u> , 20% = <u>6</u>	<u>30</u>	= Total Cover		
Woody Vine Stratum (Plot size: 20' diameter)				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. <u>Hedera helix</u>	<u>10</u>	<u>yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
50% = <u>5</u> , 20% = <u>2</u>	<u>10</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>70</u>				

Remarks: The hydrophytic vegetation criterion is not met because there is less than 50% dominance by FAC species.

SOILSampling Point: TP 2**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		
0-4	10YR 2/2	100	_____	_____	_____	_____	gr sa lo	_____
4-10	10YR 3/6	100	_____	_____	_____	_____	gr sa lo	_____
_____	_____	_____	_____	_____	_____	_____	_____	Tree root
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	gr - gravelly
_____	_____	_____	_____	_____	_____	_____	_____	sa - sandy
_____	_____	_____	_____	_____	_____	_____	_____	lo - loam

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: The soil profile does not meet any of the hydric soil indicators because the soil matrix chromas are not depleted.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Sparsely Vegetated Concave Surface (B8)

- ☐ Water-Stained Leaves (B9)
(except MLRA 1, 2, 4A, and 4B)
☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Stunted or Stresses Plants (D1) **(LRR A)**
☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**

Yes

☐

No

☒

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

Remarks: Hydrology was not present during the field visit and there was no evidence of wetland hydrology.

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

Project Site: Spargur Loop Property-Septic Easement City/County: Bainbridge/Kitsap Sampling Date: 4/27/20
 Applicant/Owner: Justin Hugeot Emily Kroman State: WA Sampling Point: TP 3
 Investigator(s): J. Bartlett Section, Township, Range: S 34 T 26N R 2EWM
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1-2%
 Subregion (LRR): MLRA 2 Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: 32 McKenna gravelly loam NWI classification: None
 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 type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The property at 9185 NE Spargur Loop Road is developed and the forested area along the west edge will serve as the drainfield for the adjacent property for which an RUE is being obtained. There is no room on the RUE property because of the extent of wetlands and buffers. This area is composed of upland forest that slopes gradually down to the north and northwest. The driveway lies between the easement and Wetland D. Test Plot 3 was conducted at the north end of the forest.		

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 30' diameter)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Thuja plicata</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>43</u> (A/B)
4. _____	_____	_____	_____	
50% = <u>7.5</u> , 20% = <u>3</u>	<u>15</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20' diameter)				Prevalence Index worksheet:
1. <u>Vaccinium parvifolium</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	
2. <u>Rubus spectabilis</u>	<u>10</u>	<u>yes</u>	<u>FAC</u>	OBL species _____ x1 = _____
3. <u>Ilex aquifolium</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	FACW species _____ x2 = _____
4. _____	_____	_____	_____	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = <u>15</u> , 20% = <u>6</u>	<u>30</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 10' diameter)				Column Totals: _____ (A) _____ (B)
1. <u>Polystichum munitum</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____
2. <u>Athyrium cyclosorum</u>	<u>5</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. <u>Equisetum arvense</u>	<u>5</u>	<u>yes</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>12.5</u> , 20% = <u>5</u>	<u>25</u>	= Total Cover		
Woody Vine Stratum (Plot size: 20' diameter)				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. <u>Hedera helix</u>	<u>20</u>	<u>yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
50% = <u>10</u> , 20% = <u>4</u>	<u>20</u>	= Total Cover		
% Bare Ground in Herb Stratum <u>75</u>				

Remarks: The hydrophytic vegetation criterion is not met because there is less than 50% dominance by FAC species.

SOIL

Sampling Point: TP 3

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		
0-6	10YR 2/1	100	_____	_____	_____	_____	silt loam	_____
6-16	10YR 4/3	95	10YR 4/6	5	C	M	gr silt loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	Tree root
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	gr - gravelly
_____	_____	_____	_____	_____	_____	_____	_____	sa - sandy
_____	_____	_____	_____	_____	_____	_____	_____	lo - loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix, RC=Root Channel**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric Soils Present?Yes ☐ No ☒

Remarks: The soil profile does not meet any of the hydric soil indicators because the soil matrix chromas are not depleted.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☐ Saturation (A3)
☐ Water Marks (B1)
☐ Sediment Deposits (B2)
☐ Drift Deposits (B3)
☐ Algal Mat or Crust (B4)
☐ Iron Deposits (B5)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☒ Sparsely Vegetated Concave Surface (B8)

- ☐ Water-Stained Leaves (B9)
(except MLRA 1, 2, 4A, and 4B)
☐ Salt Crust (B11)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Stunted or Stresses Plants (D1) **(LRR A)**
☐ Other (Explain in Remarks)

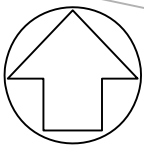
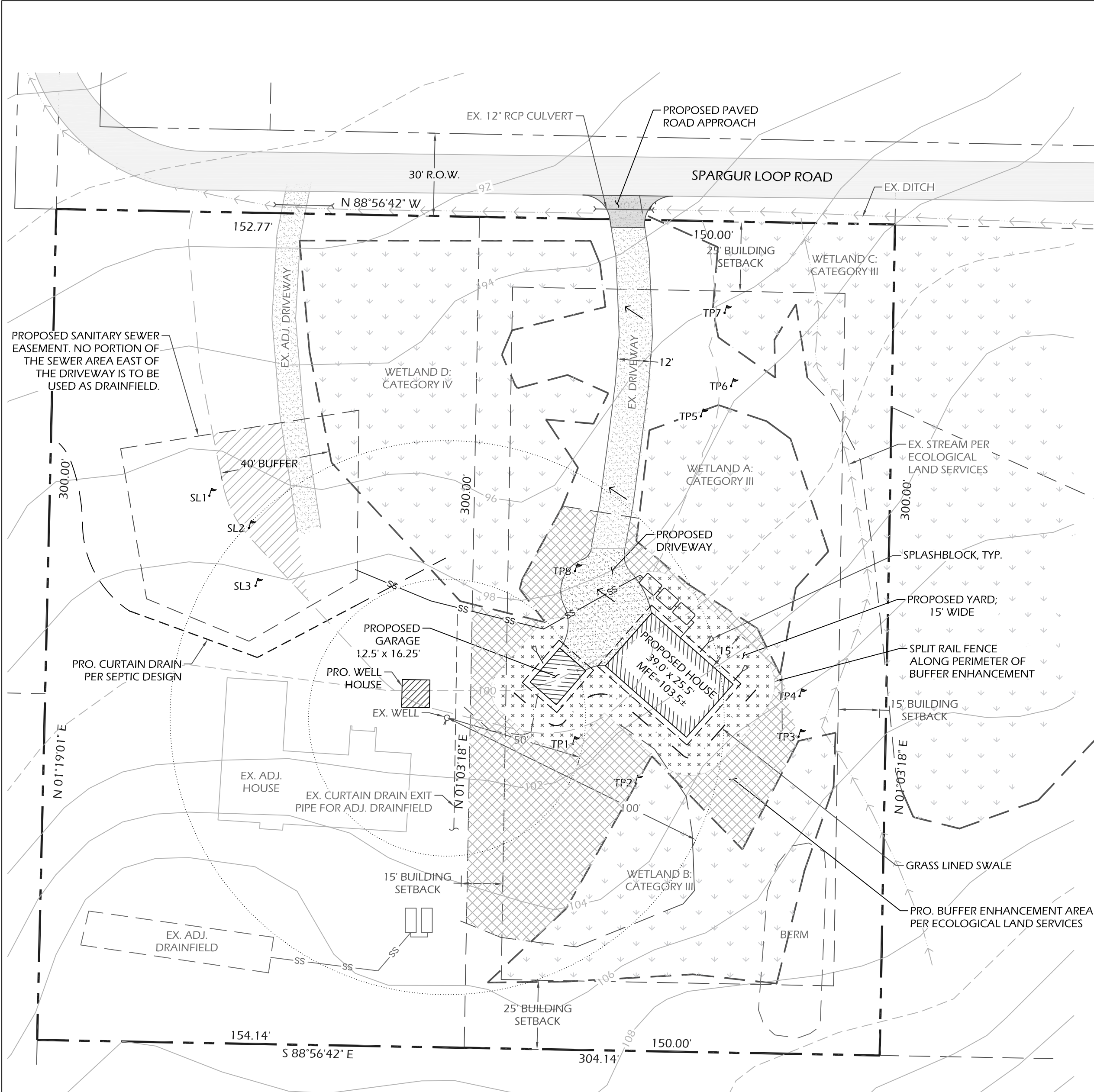
Secondary Indicators (2 or more required)

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

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?** Yes ☒ No ☐

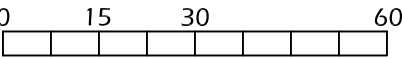
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Evidence of surface water present-this area is the lowest spot on the property and is adjacent to the ditch along Spargur Loop Road.



SITE PLAN

SITE PLAN BASED ON AGO LAND SURVEYING LLC SURVEY DATED 2.24.2020. TOPOGRAPHIC INFORMATION BASED ON KITSAP COUNTY PUD AERIAL LIDAR 2-FT CONTOURS, NOT A SURVEY. DATUM: NAVD88
SCALE: 1" = 30'



NOTES:

1. STORM DRAINAGE:
 - ROOFTOP STORMWATER WILL BE CONVEYED TO SPLASHBLOCKS FOR DOWNSPOUT DISPERSION PER BMP T5.10B.
 - STORMWATER FROM NEW AND EX. DRIVEWAY WILL SHEET FLOW DISPERSE INTO EXISTING VEGETATION PER BMP T5.12.
 - A GRASS LINED SWALE WILL CONVEY UPHILL RUNOFF AWAY FROM BUILDINGS.
2. DETAILED EROSION & SEDIMENT CONTROL PLAN WILL BE DEVELOPED DURING FINAL DESIGN.
3. WETLAND DELINEATION AND WETLAND BUFFER PER ECOLOGICAL LAND SERVICES REPORT DATED 10.14.2019.
4. SEPTIC INFORMATION SHOWN PER SEPTIC DESIGN BY CHARLES H. POLLMAR & ASSOCIATES RECEIVED IN MAY 2020.

LEGEND

	EXISTING PROPERTY LINES
	BUILDING SETBACKS
	EXISTING ROAD
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING ASPHALT PAVEMENT
	EXISTING GRAVEL
	DELINEATED WETLAND
	WETLAND BUFFER
	PROPOSED PAVEMENT
	PROPOSED GRAVEL
	PROPOSED BUILDING
	PROPOSED ROOFTOP
	PROPOSED YARD
	PROPOSED BUFFER ENHANCEMENT AREA
	PROPOSED BUFFER ENCROACHMENT AREA

PARCEL INFORMATION

TAX ID: 342602-4-033-2007
AREA: 1.03-ACRES, APPROX. 44,867-SF

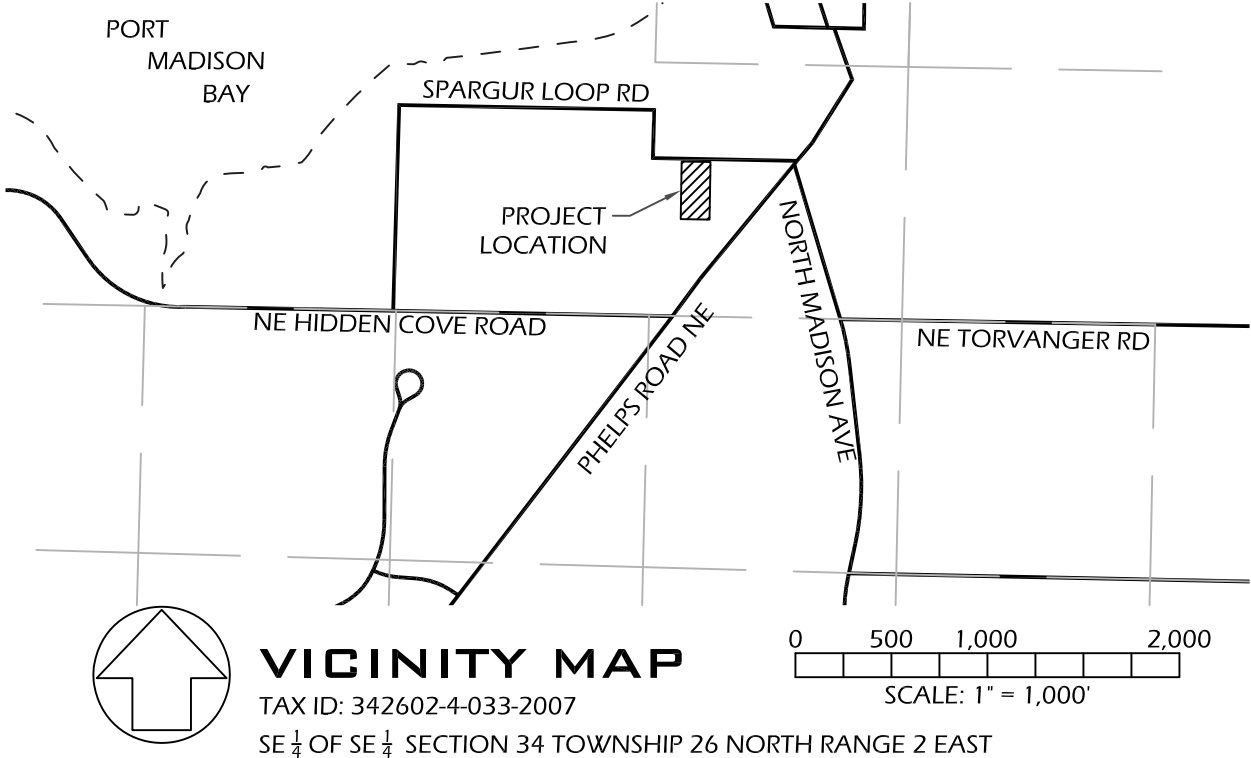
ZONING: R-0.4
BUILDING SETBACKS:
FRONT: 25-FT - 2 STORY HOUSE OR LESS
SIDES: 15-FT TOTAL
REAR: 25-FT - 2 STORY HOUSE OR LESS
MAXIMUM LOT COVERAGE: 10% OF SITE

CRITICAL AREAS: CATEGORY III & CATEGORY IV WETLANDS ON SITE; CATEGORY II AQUIFER RECHARGE AREA
WETLAND AREA ON SITE: ±16,850-SF; 37.6%
WETLAND BUFFER AREA ON SITE: ±28,016-SF; 62.4%
PRO. HOUSE & PRO. DRIVEWAY ENCROACHMENT INTO WETLAND BUFFER: 2,203-SF
PRO. DRAINFIELD EASEMENT ENCROACHMENT INTO WETLAND BUFFER ON WESTERN PROPERTY: 1,124-SF

EXISTING HARD SURFACES:
DRIVEWAY: ±1,435-SF; 3.2%
TOTAL EXISTING HARD SURFACES: ±1,435-SF; 3.2%

PROPOSED HARD SURFACES:
BUILDING FOOTPRINTS; 1,198-SF; 2.7%
ROOFTOPS: ±1,620-SF; 3.6%
DRIVEWAY: ±915-SF; 2.0%
TOTAL PROPOSED HARD SURFACES: 2,535-SF; 5.6%

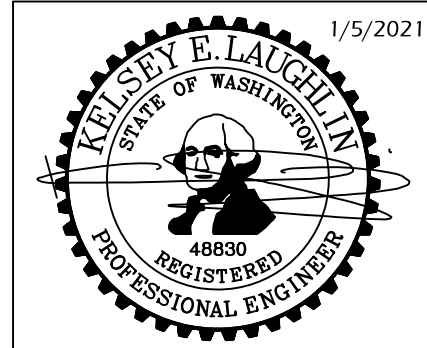
ON-SITE STORMWATER BMP'S:
ROOFTOPS: DOWNSPOUT DISPERSION; BMP T5.10B
DRIVEWAY: SHEET FLOW DISPERSION; BMP T5.12



VICINITY MAP

TAX ID: 342602-4-033-2007
SE ¼ OF SE ¼ SECTION 34 TOWNSHIP 26 NORTH RANGE 2 EAST

**CONCEPTUAL DRAINAGE PLAN
SPARGUR LOOP RD - HUGUET-KROMAN RESIDENCE
REASONABLE USE EXEMPTION SUBMITTAL**



1/5/2021

**SEABOLD
ENGINEERING LLC**

PO BOX 445 INDIANOLA, WA 98342
360.930.4668 ENGINEER@SEABOLDENG.COM

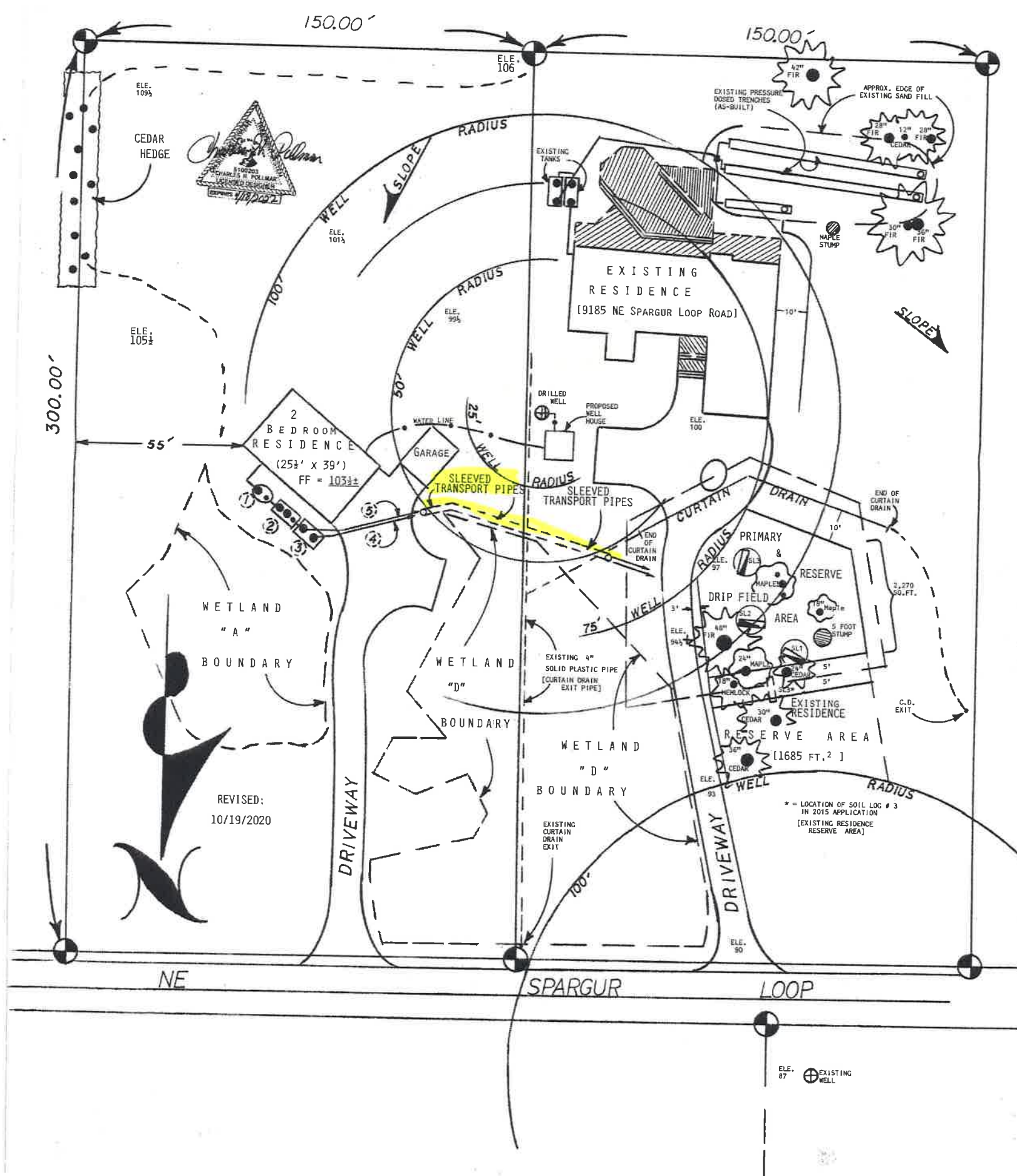
7.21.2020 K.E.L. REVISED SITE PLAN AS REQUESTED BY OWNER.
1.5.2021 K.E.L. UPDATED SEPTIC PIPELINE AS REQUESTED BY OWNER.

DATE: ~~11/25/2019~~
DESIGNED: K. LAUGHLIN
DRAWN: J. ADAM
CHECKED: K. LAUGHLIN
JOB NO.: HU10.10

EMILY KROMAN & JUSTIN HUGUET
9185 SPARGUR LOOP ROAD
BAINBRIDGE ISLAND, WA 98110
jbhuguet@gmail.com
emilykroman@gmail.com
206.919.6546

C 1
1 OF 1

- (1) = 1000 GALLON, CONCRETE, TRASH TRAP WITH SCREENED OUTLET BAFFLE
- (2) = NEWATER CONCRETE TANK w/BNR 500 AEROBIC TREATMENT UNIT (ATU)
- (3) = 1250 GALLON, CONCRETE, PUMP TANK WITH ORENCO, BIOTUBE PUMP VAULT
- (4) = 1" SCHEDULE 40 PVC SUPPLY LINE
- (5) = 1" SCHEDULE 40 PVC RETURN LINE - EXITS INTO (THROUGH) PUMP TANK RISER



BAINBRIDGE ISLAND



FIRE DEPARTMENT

MEMO

To: Annie Hiller, Planning Department
From: Jackie Purviance, Deputy Fire Marshal
CC:
Date: December 4, 2019
Re: Huguet-Kroman RUE PLN51228

The submittal has been reviewed resulting in the following comments:

1. The proposed project shall comply with all provisions of the adopted Fire Code including the following as applicable:
2. The grade of existing private fire apparatus access roads shall not exceed 12%. Private fire apparatus access roads where grades are greater than 12% but not exceeding 15% shall be paved, or in lieu of paving, shall have an automatic fire sprinkler system installed in any new structure. Grades exceeding 15% will require the fire apparatus access road to be paved, all new structures to be equipped with automatic fire sprinkler systems, and special approval by the fire code official.
3. Fire apparatus access roads shall be not less than 12 foot drivable width with 13.5 feet of overhead clearance for the entire length.
4. Fire flow is required for this occupancy. Fire flow shall be met through existing fire hydrant located at the corner of Spargur Loop Rd/Madison Ave NE/Phelps Rd NE.



Department of Public Works - Engineering

Memorandum

Date: April 28, 2020
To: Annie Hillier, Planner, Planning and Comm. Development
From: Paul Nylund, P.E., Development Engineer
Subject: PLN51228 – Huguet-Kroman RUE PW-DE Conditions of Approval
Memorandum

Project Description:

The proposal seeks a reasonable use exception (RUE) to construct a single-family residence (SFR) on a 1.03 acre lot that is composed entirely of wetland and associated buffer with no opportunity for administrative buffer reductions. The subject parcel is identified by tax id 032502-1-069-2008 and is located on the south side of Spargur Loop Road, west of Phelps Road NE in the City of Bainbridge Island.

Recommendation

I have completed a review of the above-referenced project materials received by the City on November 27, 2019 and deemed complete on April 20, 2020. The reasonable use exception is recommended for **APPROVAL** based on the following findings pursuant to Bainbridge Island Municipal Code (BIMC) 16.20.080 and subject to the conditions that follow.

1. The proposal is consistent with applicable regulations and standards as it pertains to surface stormwater drainage per BIMC 15.20 and 15.21;
2. The proposal protects the critical area functions and values consistent with the best available science as it pertains to the incorporation of low impact development (LID) for the purpose of handling of stormwater, retaining vegetation, and mimicking natural hydrology to the maximum extent feasible;
3. The site plan as submitted conforms to the City of Bainbridge Island Design and Construction Standards and Specifications, "the Standards" where applicable

Comments:

1. Existing access to the COBI ROW shall be improved to the standard paved residential driveway approach detail DWG. 8-170.
2. All underground utilities (well water, septic transport, power, etc.) shall be routed to minimize site disturbances to the maximum extent feasible.

3. Use of soil sterilant to construct the driveway shall be strictly prohibited.
4. Consideration shall be given to utilizing minimal excavation foundation systems per the 2012 Low Impact Development Guidance Manual for Puget Sound as means of minimizing impacts to the site and the adjacent critical areas. A bid comparison/analysis shall be submitted demonstrating the applicant has engaged an appropriate design and construction professional to explore alternative foundation systems including stilts, helical piers, and pin piles with grade beams. The bid shall be obtained from a designer or installer with previous experience building with this technology.
5. Areas outside the building footprint, driveway, septic components and field and any necessary construction setbacks shall be protected from soil stripping, stockpiling, and compaction by construction equipment through installation of resilient, high visibility clearing limits fencing or equivalent, subject to inspection by the City prior to clearing and construction.
6. Hardscaping should be constructed of permeable materials or contain wide permeable jointing where feasible to allow infiltration or shallow subsurface filtration of surface stormwater.
7. Surface stormwater from the proposed structures and from the developed driveway shall discharge and disperse at a location and in a manner consistent with BMP T5.10B – Downspout Dispersion Systems. Strong priority shall be given to diffuse flow methods (i.e. BMP C206: Level Spreader, pop-up emitters, diffuser tee or engineered equivalent to minimize point discharges of surface stormwater to the wetland buffer.


CITY OF BAINBRIDGE ISLAND

Department of Planning & Community Development

280 Madison Avenue North, Bainbridge Island, WA 98110

 Phone: 206-842-2552 Email: pcd@bainbridgewa.gov

 Website: www.bainbridgewa.gov

 Portal: <https://ci-bainbridgeisland-wa.smartgovcommunity.com/portal>
LETTER OF TRANSMITTAL

PROJECT NAME Huguet-Kroman RUE		ORIGINAL SUBMITTAL DATE 11/27/2019	TRANSMITTAL DATE 12/03/2019
PROJECT NUMBER PLN51228 RUE	SUFFIX RUE	PROJECT TYPE Reasonable Use Exception	
PROJECT STREET ADDRESS OR ACCESS STREET NE Spargur Loop Rd		TAX PARCEL NUMBER 34260240332007	
CITY PROJECT MANAGER ANNIE HILLIER			
PHONE (206) 780-3773	EMAIL ahillier@bainbridgewa.gov		
REVISION RECEIVED:			
PROJECT DESCRIPTION Construct 1198 sf SFR and GAR within wetland buffer.			
REVIEW PACKET TO			
♦♦HEALTH DISTRICT REVIEW - KITSAP PUBLIC HEALTH Please see check attached for \$145. Please review electronic documents. <i>Steve Brown</i>		<input checked="" type="checkbox"/> FIRE DEPT REVIEW - JACKIE PURVIANCE	
<input type="checkbox"/> DEVELOPMENT ENGINEER - DEVELOPMENT ENGINEERING REVIEW QUEUE		<input type="checkbox"/> CRITICAL AREA REVIEW - ANNIE HILLIER	
<input type="checkbox"/> BUILDING REVIEW - TODD CUNNINGHAM			
<input type="checkbox"/> FISH & WILDLIFE			
Owner(s) JUSTIN B & KROMAN EMILY E HUGUET PH: 206-919-6546 E-MAIL: emilykroman@gmail.com		Contact(s) JUSTIN B & KROMAN EMILY E HUGUET PH: 206-919-6546 E-MAIL: emilykroman@gmail.com	
TRANSMITTED DOCUMENTS			
DOCUMENT 1	DOCUMENT 2	DOCUMENT 3	



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SAR LETTER	REPORT-BUFFER MITIGATION	HEALTH DISTRICT DOCUMENTATION
DOCUMENT 4 SEPA-ENVIRONMENTAL CHECKLIST	DOCUMENT 5 PLANS-SWM	DOCUMENT 9 PREAPP LETTER
DOCUMENT 7 REPORT-WETLAND	DOCUMENT 8 NARRATIVE	
DOCUMENT 10 APP-PROJECT	DOCUMENT 11 SITE PLAN	

COMMENTS DUE BY: 12/17/2019

COMMENTS



No Comments



See Attached Comments/Conditions

Signed: _____

Date: 12-12-19

Please Print Name: _____

Steven J. Brown