Applicant	**Roland and Cindy Gorgas**
Address	**17825 138th Ave SE, Yelm, WA 98597**
Location of Property	**Yelm**
Acres in Application	**76.96**
Parcel number(s)	**22609310000**

A. Site Characteristics & Context

The parcel under consideration totals 76.96 acres, all of which are proposed for the Open Space–Open Space Tax program. The property owners are applying for the classification Farm and Agricultural Conservation Land (15 acres) and Significant Wildlife Habitat Area (61.96 acres), with no public access (**Map 1**).

There are no structures or utilities onsite; a farmstead once existed on the property, with only orchard trees remaining. The Gorgas property has received agricultural use for approximately 100 years, including black Angus cattle production under the previous ownership from 1964 to 2007. Current agricultural use onsite includes haying, honeybee rearing and honey production, with honey often sold at local markets under the business name of Forest Dog Farms. The majority of the property consists of freshwater emergent wetland, with areas of upland pasture and mixed-age forest including some mature trees, large snags, and downed logs. The southern 20 acres of the property underwent a forest land conversion timber harvest in 2007 under the previous ownership, and the Gorgases have since planted over 200 native trees among the naturally regenerating trees and shrubs. The zoning of the parcel is Long-Term Agriculture (LTA), with some parcels to the northwest and northeast zoned as RRR 1/5.

Water Quality Resources

The property is located in the Nisqually Water Resource Inventory Area (WRIA 11) and is situated within the Yelm Creek basin of the Nisqually watershed. The property is mapped with high groundwater and within a Category 3 Critical Aquifer Recharge Area (CARA). Critical aquifer recharge areas, protected in the Thurston County Critical Areas Ordinance (CAO) under Thurston County Code Chapter 24.10, are known to be "vital groundwater resources," and to serve as the county's chief potable water source. Yelm Creek, a Type F (fish bearing) stream and a tributary to the Nisqually River, runs west to east through the central portion of the property within the wetland (**Map 1**).

Farm and Agricultural Conservation Land Eligibility

The Gorgas property, despite its history of agricultural use, was not formerly enrolled in the Thurston County Assessor's Farm and Agriculture Open Space program. However, the Gorgas and adjacent parcels are zoned as LTA, and the property has undergone commercial agricultural use within the past 10 years up to the present. Based these factors and the

submittal of a land conservation plan, the proposed 15 acres of the property are eligible for enrollment in the Open Space-Open Space Farm and Agricultural Conservation Land priority resource category.

Fish and Wildlife Habitat

The Gorgas property, according to a recent wetland delineation, contains approximately 56.82 acres of freshwater depressional wetland and 20.14 acres of upland. The wetland delineation and report rated the wetlands as Category II, with an overall score of 22, a habitat score of 9, and a plant community which contains five structures: aquatic bed, emergent, scrub-shrub, forested, and forested containing 3 out of 5 strata.

The entire property is mapped with Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) waterfowl concentrations which include breeding areas with wintering use. Yelm Creek, which passes through the wetland, is documented by Statewide Washington Integrated Fish Distribution (SWIFD) data to support Coho, steelhead, Sockeye, pink, and Chinook salmon. While the section of Yelm Creek on the Gorgas property is currently described as only "gradient accessible" to these salmonid species, sections of the creek less than ½ mile to the north have "presumed" and "documented" fish presence. If downstream barriers along the creek are replaced in the future, the Gorgas property could provide suitable fish habitat, particularly for Coho which benefit from off-channel emergent wetland habitat during their rearing life stages.

Upland portions of the Gorgas property, in addition to hay fields, include mixed-age forest and shrubs which provide shelter and forage for birds and a variety of wildlife, and include mature trees with large-diameter branches and nesting cavities (**Figure 9**). The following wildlife species listed in the CAO as Wildlife Species of Local Importance (TCC Appendix 24.25-1, Table 24.25-5 and former Title 17 Table 9) have been identified onsite by a qualified Department of Natural Resources biologist:

- Northern Harrier
- American bittern
- Short-eared owl
- American kestrel
- Band-tailed pigeon
- Peregrine falcon
- Bald eagle
- Red tailed hawk
- Bufflehead and wood ducks

Additional wildlife observed include Roosevelt elk, black tailed deer, weasel, muskrat, mallard ducks, and a variety of snakes, lizards, amphibians, and pollinating insects. At least one young Oregon white oak tree was observed in the former clear cut on the southern portion of the property during the county site visit (**Figure 9**), as well as remnant CAO-listed prairie plant species such as common camas, Virginia strawberry, large-leaf lupine, and goldenrod, valuable nectar sources for pollinators, in various locations (**Figure 10;** TCC Appendix 24.25-1, Tables 24.25-4 Habitats of Local Importance, 24.25-7 and 24.25-

8 Diagnostic Wet and Dry Prairie Plants). The presence of CAO Wildlife Species of Local Importance on the Gorgas property meets the eligibility requirement for enrollment under the Significant Wildlife Habitat category.

Management proposed: Farm and Agricultural Conservation Lands

- Invasive plant species such as Scotch broom and other brush will be controlled, using mechanical means such as mowing rather than herbicides so as not to negatively impact reared honeybees.
- Haying, honey production and honeybee forage maintenance will continue; these activities will also keep areas agricultural areas open and maintained for long-term farming.
- Agricultural activities will not cause permanent conversion of wetlands or other aquatic features onsite through activities such as draining, filling, ditching, or clearing.

Management Proposed: Significant Wildlife Habitat Area

- Invasive plant species such as reed canarygrass and Scotch broom will be controlled within 200 feet of the wetland areas. Mechanical rather than chemical control methods will be used to avoid water contamination.
- All riparian areas will be left undisturbed.
- If any additional trees are planted, they will be native species, with desirable native understory plants preserved.
- Snags and downed logs will be retained for wildlife habitat.
- A 5-year review period over the next 20 years will be implemented.

B. Public Benefit Rating System

1. *For which Priority Resources categories does the property qualify?*
   - Farm and Agricultural Conservation Land
   - Significant Wildlife Habitat Area
2. *Which public access category has the property owner agreed to?*
   - No public access is proposed
3. *Does a conservation easement or historic easement apply to the property?*
   - No conservation or historic easements
4. *Summary of Public Benefit rating:*

Category	Points
Farm and Agricultural Conservation Land	3
Significant Wildlife Habitat Area	3
TOTAL	**6**

C. Considerations

1. Does the property meet the definition of open space?

Yes, the Gorgas property appears to meet the definition of open space and meets the criteria for enrollment under the Farm and Agricultural Conservation land and Significant Wildlife Habitat Area priority resource categories.

- The subject property is mapped within the LTA zone, has undergone commercial agriculture within the past 10 years, has a land conservation plan, and will continue to be managed for hay, honey, and honeybee forage production.
- The wetland and upland habitat onsite support a variety of CAO Wildlife Species of Local Importance as well as some remnant prairie plant species and Oregon white oak. The Type F stream onsite has the potential to support Coho, steelhead, sockeye, pink, and Chinook salmon as passage barriers are replaced over time.
- Supporting documents including a farm plan, a habitat management plan written by a qualified biologist who completed the environmental assessment, and wetland delineation completed by a certified wetland scientist, were submitted with the application materials.

2. Any other factors relevant to the application in weighing the benefits to the public?

Providing a tax incentive program to limit the development of this property will help to protect the farmland, aquatic habitat, and drinking water in Thurston County. Upland habitat and forest vegetation provide refugia for a variety of wildlife in an area where extensive logging on nearby properties has recently occurred.

The management of the property as open space is consistent with other properties in the area. The classification of this land as open space and the subsequent tax relief to the landowner is also consistent with the county's initiatives to preserve open space, as described in Item 7 of the Thurston County Strategic Plan.

D. Findings

The Gorgas property meets the criteria for enrollment under the Board's Farm and Agricultural Conservation Land and Significant Wildlife habitat Area priority resource category, scoring 6 points in the Public Benefit Rating System. This makes the enrolled land, totaling 76.96 acres, eligible for a 50% reduction. This assessment is based on the following factors included in RCW 84.34 and in the Thurston County Open Space Program Guidelines:

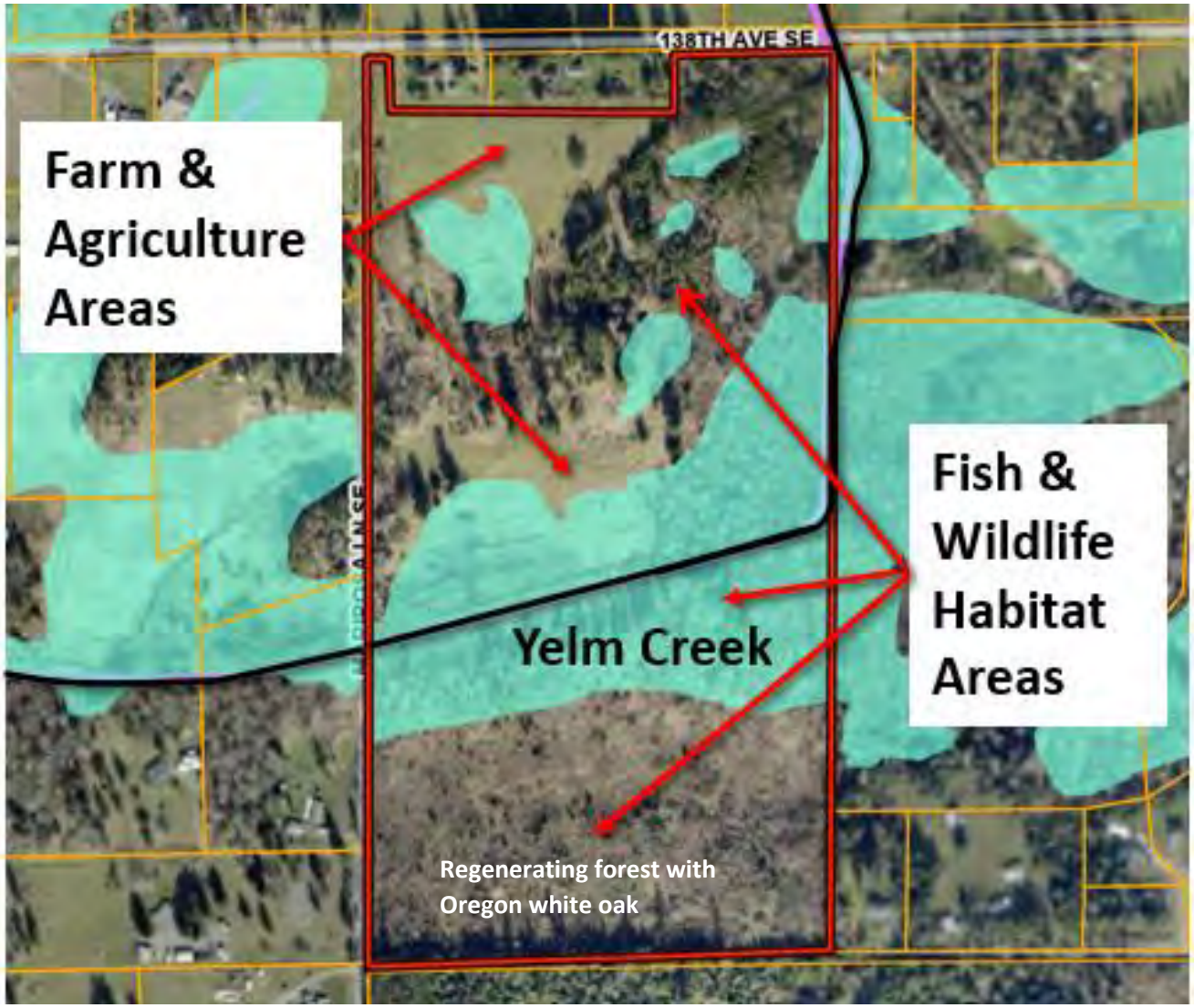
- The subject property is mapped within the LTA zone and has undergone commercial agricultural use within the past 10 years, with a land conservation plan submitted.

- The subject property is documented to support CAO Wildlife Species of Local Importance.
- Supporting documents, including a wetland delineation report, biologist report, farm management plan, and habitat management plan (HMP) completed by qualified biologists were submitted.

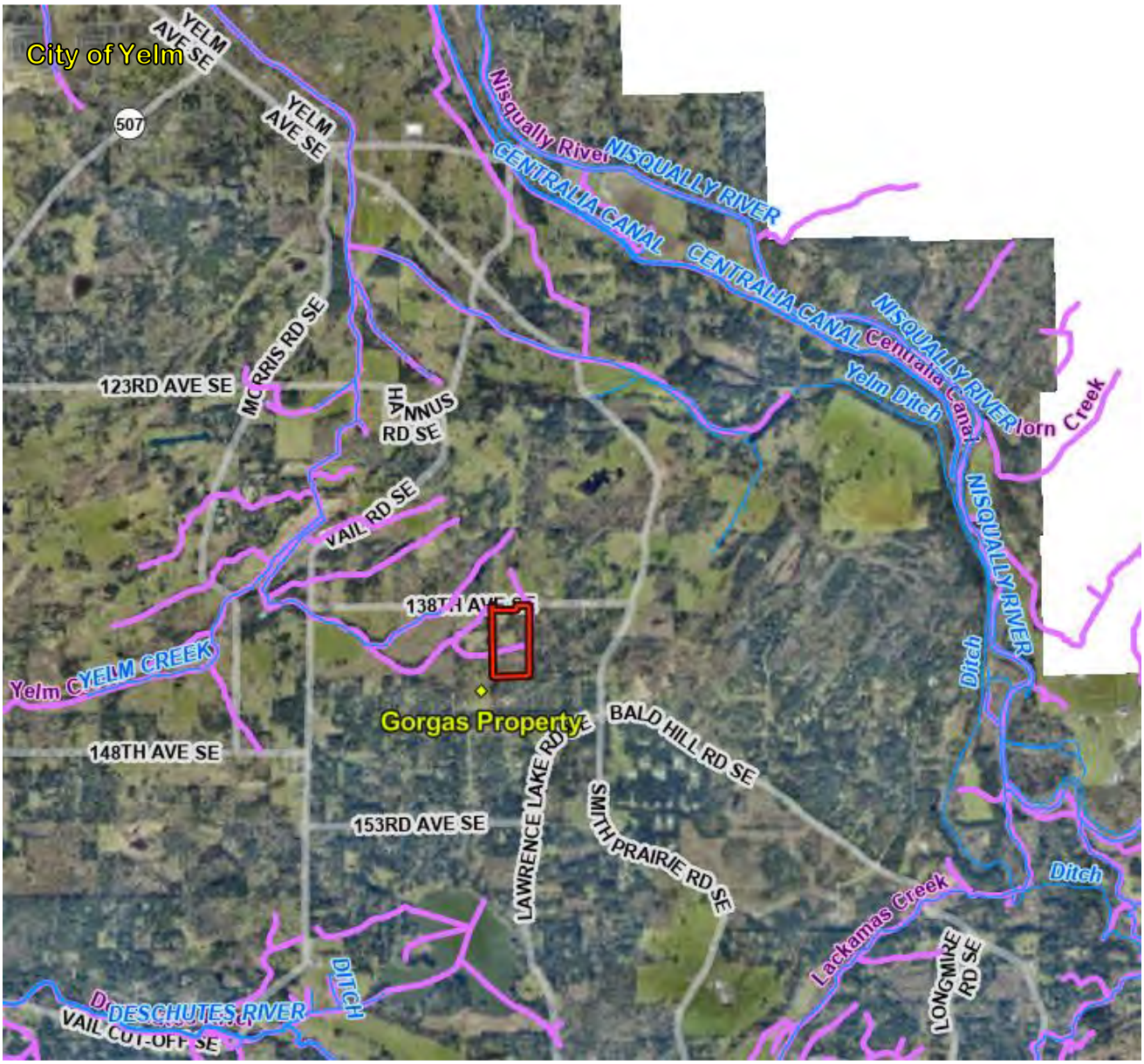
Attachments:

1. Vicinity Map
2. Master Application and Open Space Application, which includes:
3. Application
4. Site Map (p. 15 of application)
5. Assessor's Map (Attachment A, p. 14)
6. Biologist report and Habitat Management Plan (Appendix A, p. 34)
7. Wetland Delineation documents and report (Appendix B, p. 41)

Appendix A. Site Maps



Map 1. Map of agricultural and wildlife habitat areas on the Gorgas property



Map 2. Gorgas property location map. The subject parcel lies southeast of Yelm, west of Bald Hill Rd. SE and east of Vail Rd. SE

Appendix B. Site Photos

Figure 1. Hayfield just S. of Gorgas residence

Figure 2. Gorgas hayfield after baling

Figure 3. Orchard trees from former farmstead

Figure 4. Beehive in edge of regenerating forest

Figure 5. Freshwater emergent wetland (aquatic bed)

Figure 6. Yelm Creek, within wetland

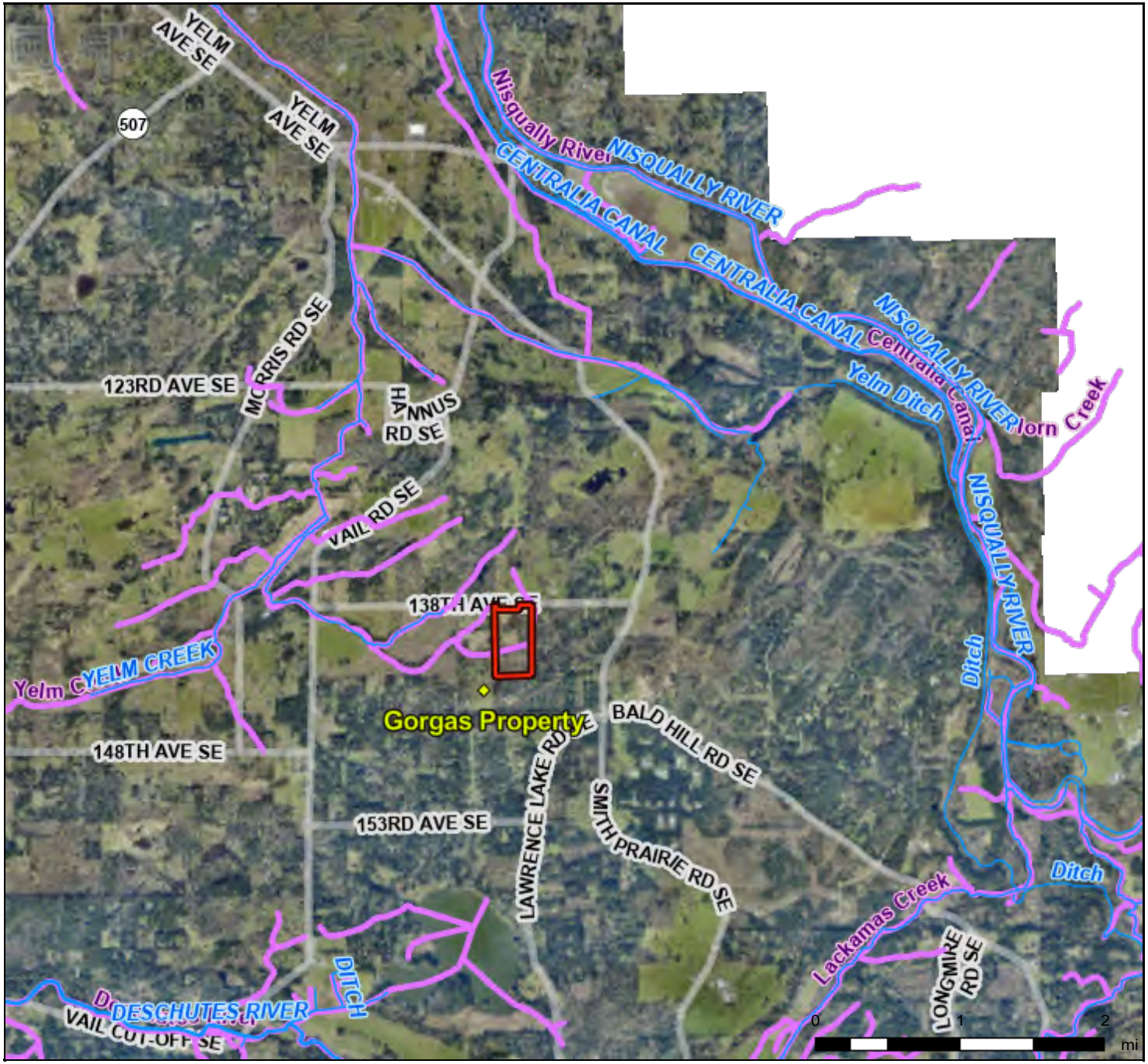
Figure 7. Wetland with reed canarygrass in foreground

Figure 8. Wetland with snags

Figure 9. Mature Douglas firs with nesting cavity (left) and Douglas squirrel (center); young oak (right)

Figure 10. Common camas (left), large-leaf lupine (center) and Virginia strawberry (right)

Gorgas Location Map



Legend

More Layers

Natural Resources Group

Protected Species Group

Author:

Published: 17/6/2025

Notes

THURSTON COUNTY
WASHINGTON
SINCE 1852

Thurston County GeoData Center

THURSTON COUNTY
WASHINGTON
SINCE 1852

Building Development Center
3000 Pacific Ave SE, Suite 100Olympia, WA 98501
(360)786-5490 / (360)754-2939 (Fax)
TDD Line (360) 754-2933
Email: permit@co.thurston.wa.us
www.thurstoncountybdc.com
Creating Solutions for Our Future

MASTER APPLICATION

This application must accompany a project specific supplemental application.

STAFF USE ONLY	DATE STAMP
NOTE: Al IN BLACK 2025102340 25-107359 VA Area: Site: UNKNOWN 22609310000 Sub Type: Open Space-Open Space **Gopher Soils** ☐ YES ☐ NO **Prairie Soils** ☐ YES ☐ NO	THURSTON COUNTY RECEIVED JUN 04 2025 BUILDING DEVELOPMENT CENTER **Intake By:** _____

PROJECT DESCRIPTION Application for Open Space

PROPERTY INFORMATION

1. **Tax Parcel Number(s)** 22609310000 ; _____ ; _____
2. **Subdivision Name** N/A **Lot #** _____
3. **Property Address** unassigned **City** Yelm **Zip Code** 98597
4. **Directions to Property** (from Thurston County Courthouse)
Go to Yelm, Continue to Bald Hill Road. Stay on Bald Hill Road or take Vail Road South. Go to 138th Ave. SE. Parcel is off 138th Ave. SE and sits behind 17825 138th Ave. SE Yelm, WA 9597

PROPERTY ACCESS

5. **Property Access** ☑ Existing ☐ Proposed
6. **Access Type** ☑ Private Driveway ☐ Shared Driveway ☐ Private Road ☐ Public Road
7. **Property Access Issues** (locked gate, gate code, dogs or other animals) ☐ No ☑ Yes Gate locked. Contact for access.
Point of contact will be contacted for gate code prior to site visit. Gate codes written on this form are public information. Property owner is responsible for providing gate code and securing animals prior to site visit.

WATER/SEPTIC

8. **Water Supply** ☐ Existing ☐ Proposed
9. **Water Supply Type** ☐ Single Family ☐ Two Party Well ☐ Group A ☐ Group B
WATER SYSTEM NAME N/A
10. **Waste Water Sewage Disposal** ☐ Existing ☐ Proposed
11. **Sewage Disposal System Type** ☐ Individual Septic System ☐ Community System ☐ Sewer
NAME OF PUBLIC SYSTEM _____

BILLING OF INVOICES

The fee charged at the time of application covers base hours listed on the fee schedule. When base hours by a Department are used, a monthly billing invoice is generated at the hourly rate listed on the fee schedule. Should review of the project exceed the base hours allotted, billing invoices shall be mailed to: ☐ **Owner** ☐ **Applicant** ☐ **Point of Contact**

PROPERTY OWNER (additional property owner sheet can be obtained online at www.thurstoncountybdc.com)

Property Owner Name Roland and Cindy Gorgas

Mailing Address 17825 138th Ave SE City Yelm State WA Zip Code 98597

Phone (____) _____ Cell (253) 380 3002 Fax (____) _____

EMAIL astrofreak03@yahoo.com

Communication from staff provided by Email? ☑ **YES** ☐ **NO**

Property Owner Signature* Cindy Gorgas **Date** 6/4/25

APPLICANT

Applicant Name Roland and Cindy Gorgas

Mailing Address 17825 138th Ave SE City Yelm State WA Zip Code 98597

Phone (____) _____ Cell (253) 380 3002 Fax (____) _____

EMAIL _____

Communication from staff provided by Email? ☐ **YES** ☐ **NO**

Signature* Cindy Gorgas **Date** 6/4/25

POINT OF CONTACT (Person receiving all County correspondence)

Name Cindy Gorgas

Mailing Address 17825 138th Ave SE City Yelm State WA Zip Code 98597

Phone (____) _____ Cell (253) 380 3002 Fax (____) _____

EMAIL _____

Communication from staff provided by Email? ☑ **YES** ☐ **NO**

Signature* Cindy Gorgas **Date** 6/4/25

*DISCLAIMER

Application is hereby made for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in the application package and that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. I hereby grant to the agencies to which this application is made or forwarded, the right to enter the above-described location to inspect the proposed, in-progress or completed work. I agree to start work only after all necessary permits/approvals have been received.

THURSTON COUNTY
WASHINGTON
SINCE 1852

Thurston County Planning Department
3000 Pacific Ave SE, Suite 100
Olympia, WA 98501
(360)754-3355 / (360)754-2939 (Fax)
Email: permit@co.thurston.wa.us
www.thurstoncountywa.gov/departments/permitting

OPEN SPACE CLASSIFICATION APPLICATION FOR CURRENT USE-BASED PROPERTY TAX ASSESSMENT

IMPORTANT: Please read the Instructions, Things to Know, and Eligibility Criteria sheets before completing this form.

Name(s) of Applicant(s) Roland & Cindy Gorgas

Mailing Address 17825 138th Av. S.E. Yelm. WA 98597

Day Phone Number(s) 253-380-3002

Tax Parcel Number(s) 22609310000

General Location of Property

Between Vail & Bald Hill Roads, off 138th.

1. Legal Interest in Property:

   ☑ Owner ☐ Contract Purchaser ☐ Other (Describe) _____

2. Total Acreage of Property 76.96

3. Acreage to be Enrolled in Open Space Program 76.96

4. What is the Property Currently Used for? Habitat, Agriculture

5. What kind of public access do you propose? (Note: Public access is not required for program eligibility.)

   ☑ **None**

   ☐ **Partial Access** (1 point): Public access on a seasonal basis or access by members of the organization utilizing the facility.

   ☐ **Substantial Access** (2 points): Year-round access to members and available to the public upon special arrangement. Any user fees may not exceed three times the average cost for members.

   ☐ **Unlimited Access** (4 points): Year-round access to the public without special arrangement.

   Please describe or explain:

6. Do you propose to apply a conservation easement or historic easement to your property?

☐ Yes (type: _____) Does one exist now? ☐ Yes (type: _____)
☑ No ☑ No

Who will hold (or does hold) the easement? N/A

7. **Before completing this part of the application**, use the blue "Eligibility Criteria Checklist" to determine if your property qualifies for any of the Priority Resource categories. (Property must be eligible for at least one Priority Resource and at least 3 points in order to be classified as open space.) Use the list below to indicate which Priority Resource categories you can document eligibility for. Refer to the gray "Help List" for sources of assistance, if needed.

HIGH PRIORITY RESOURCES (3 points each)

# Acres		
_____	a.	Archaeological Sites
15	b.	Farm and Agricultural Conservation Land (FACL)
_____	c.	Fish-Rearing Habitat--Ponds and Streams
_____	d.	Geological and Shoreline Features
_____	e.	Historical Sites
_____	f.	Private Recreation Areas
_____	g.	Rural Open Space Close to Urban or Growth Areas
61.96 ~~56.96~~	h.	Significant Wildlife Habitat Areas
_____	i.	Special Plant Sites
_____	j.	Urban or Growth Area Open Space

MEDIUM PRIORITY RESOURCES (2 points each)

# Acres		
_____	a.	Public Land Buffers
_____	b.	Scenic Vista or Resources

LOW PRIORITY RESOURCES (1 point each)

# Acres		
_____	a.	Resource Restoration

8. **IMPORTANT! Read all of the following information regarding tax liabilities before signing this application form.**

You will owe to the County the following additional taxes, interest and penalties when your property is removed or withdrawn from current use classification. The following is a summary of state law. Consult RCW Chapter 84.34 for details.

STATEMENT OF ADDITIONAL TAX, INTEREST, AND PENALTY DUE UPON REMOVAL OF CLASSIFICATION:

A. Upon removal of classification, an additional tax shall be imposed which shall be due and payable to the county treasurer 30 days after removal or upon sale or transfer, unless the new owner has signed the Notice of Continuance. The additional tax shall be the sum of the following:

   a. The difference between the property tax paid as "Open Space Land" and the amount of property tax otherwise due and payable for the last seven years had the land not been so classified; plus

   b. Interest upon the amounts of the difference (a), paid at the same statutory rate charged on delinquent property taxes.

   c. A penalty of 20% shall be applied to the additional tax if the classified land is applied to some other use except through compliance with the property owner's request for withdrawal process, or except as a result of those conditions listed in (B) below.

B. The additional tax, interest, and penalty specified in (8A) above shall not be imposed if removal resulted solely from:

   a. Transfer to a governmental entity in exchange for other land located within the State of Washington.

   b. A taking through the exercise of the power of eminent domain, or sale or transfer to an entity having the power of eminent domain in anticipation of the exercise of such power.

   c. A natural disaster such as a flood, windstorm, earthquake, or other such calamity rather than by virtue of the act of the landowner changing the use of such property.

   d. Official action by an agency of the State of Washington or by the county or city where the land is located disallows the present use of such land.

   e. Transfer of land to a church when such land would qualify for property tax exemption pursuant to RCW 84.36.020.

   f. Acquisition of property interests by State agencies or agencies or organizations qualified under RCW 84.34.210 and 64.04.130 (See RCW 84.34.108(6)(f)).

g. Removal of land classified as farm & agricultural land under RCW 84.34.020(2)(e) (farm homesite).

h. Removal of land from classification after enactment of a statutory exemption that qualifies the land for exemption and receipt of notice from the owner to remove the land from classification.

i. The creation, sale, or transfer of forestry riparian easements under RCW 76.13.120.

j. The creation, sale, or transfer of a fee interest or a conservation easement for the riparian open space program under RCW 76.09.040.

k. The sale or transfer of land within two years after the death of the owner of at least a fifty percent interest in the land if the land has been assessed and valued as designated forest land under chapter 84.33 RCW, or classified under this chapter 84.34 RCW continuously since 1993. The date of death shown on the death certificate is the date used.

Removals and withdrawals from the program are processed by the Thurston County Assessor.

I (We) the undersigned, swear under the penalty of perjury, that I (We) am (are) the owner(s) or contract purchaser(s), of the land described above and that the above responses are made truthfully and to the best of my (our) knowledge. I (We) also understand that, should there be willful misrepresentation or willful lack of full disclosure on my (our) part, the granting authority, which may hereafter classify said land under the provisions of Chapter 84.34 RCW, may subsequently remove the classification. In addition, I (we) am (are) aware of the potential tax liability described above.

DATE: 6/2/2025 OWNERS: _____

Cindy Guy

SUBSCRIBED and SWORN to before me this 2 day of June, 2025.

NOTARY PUBLIC
STATE OF WASHINGTON
MICHAEL ARNESON
MY COMMISSION EXPIRES
MAY 31, 2027
COMMISSION NO. 23021497

Michael Arneson (M)

Notary Public in and for the State of Washington, residing in Thurston County

June 4, 2025

TO: Marisa Whisman
FROM: Cindy Gorgas
RE: Open Space Application

Hi Marissa,

Please find enclosed an Open Space application packet for Thurston County parcel 2260931000.

Included in the packet :

1. Thurston County Master Application (2 pages)
2. Open Space Application, signed and notarized (4 pages)
3. Application payment of $1,856.00
4. Application Narrative for FACL and SWH Habitat(s) Management Plan (six pages)
5. Attachments and photos (10 pages)
6. Appendix A : WA State Biologists Habitat Report/Plan (six pages)
7. Appendix B: Wetland Assessment and Delineation (94 pages)

Please feel free to contact me at 253-380-3002 or astrofreak03@yahoo.com to schedule a site visit and or with any questions you have.

Thank you for all your help as we've worked through the application process.

Thurston County Current Use/Open Space Tax Program
2025 Application

Application and supporting documents
hand delivered to Thurston County Planning June 4, 2025

Applicant(s): Roland and Cindy Gorgas, doing business as Forest Dog Farms
Mailing address: 17825 138th Ave. SE Yelm, WA 98597
Location of property: Thurston County/ outside city limits of Yelm
Acres in parcel: 76.960
Parcel Number: 22609310000
The Northeast Quarter of the Southwest Quarter and the Southeast Quarter of the Southwest Quarter of said Section Nine (9), Township Sixteen (16), North Range Two (2), East, W.M.
Thurston County Recording 4737807.

A: Site Characteristics

Parcel 22609310000 is 79.960 acres in total, all of which are being proposed for the open space tax program with 15 acres as Farm and Agriculture Land (FACL) and 61.96 acres as Significant Wildlife Habitat. (Attachment B). No public access is proposed. Zoning is long term agriculture(LTA). The property is undeveloped and has no utilities or structures. The property lies east of the town of Rainier and south east of the city of Yelm in rural Thurston County (Attachment A). Several surrounding parcels are zoned LTA. The southern section of the parcel is bordered by a Rural Resource parcel (Attachment A '6848').

The U.S. Fish and Wildlife Service National Wetlands Inventory indicates the parcel contains both Freshwater Emergent Wetlands and Freshwater Forested/Shrub wetland.
(Attachment C).

Washington Department of Fish and Wildlife (WDFW) Priority Species on the web lists the portions of the parcel as a freshwater/forested

shrub aquatic habitat and a breeding and winter use area for water fowl, (Appendix B, pages 36-42).

The Washington State department of Natural resources (DNR) Forest Practices Water Type Map indicates a Type A wetland, A forested wetland and a wet area not designated by specific type of wetland(Type X). (Appendix B, page 35).

There are three distinct characteristics of the parcel:

- 15 acres of traditional farm land currently used for honey and hay production; suitable for other agricultural uses. The parcel is zoned LTA and includes United States Department of Agriculture (USDA) prime soils per Thurston County Agricultural zoning updates completed in 2024. (Attachment C)

- 56.82 acres of wetlands (swamp)consisting of marshy flood plain and deciduous trees native to western Washington; hawthorn, aspen, alder, black cottonwood trees and Salix. A wetland professional has rated the wetland as a category II wetland with an overall score of 22 and a habitat score of Nine. (Appendix B)

- 20 acres forested area with Douglas fir, scotch pine , quaking aspen, salal and Douglas spirea, red flowering current, service berry, Pacific crabapple and Nootka rose (upland forest combined with forested wetland areas)

This application proposes Open Space Classification(s) for 15 acres of Farm and Agricultural Conservation Agriculture land and 61.96 acres of Significant Wildlife Habitat.

Historic and Present Use of the Land:

The agricultural fields have been used historically for farming ,The southern portion for timber production, and significantly larger areas of the parcel are and have been swamp wildlife habitat A farmstead once occupied the property , it's only remains are some old orchard trees. The parcel was logged in 2007 . Since 2020 over 200 trees have been planted on the southern portion of the property. The agricultural fields produce hay and are used for honey bee forage.

Soil types can be found in Appendix B, pages 4-9.

Wildlife Habitat

The large size of the parcel and it's bordering hedgerows provide security cover for several pollinator communities wildlife species. Its is both a permanent residence and a wildlife corridor. The wetland rates high for the structure of the plant community as it contains five structures which are aquatic bed, emergent, shrub-scrub, forested and forested that contain three of five strata. The wetland is composed of four hydroperiods, which are permanently flooded, seasonally flooded, saturated and a ditch in and adjacent to the wetland.

The parcel contains five special habitat features: Large, downed woody debris, standing snags, undercut banks for at least 6.6 feet and/or overhanging plants for at least 3.3 feet, stable steep banks for denning and at a minimum a quarter acre thin stemmed persistent plants for amphibians. Additionally there are large fir, pine and hemlock trees for nesting.

Species observed on the property include White and Black tailed deer, Elk, weasel, muskrat, rabbit, Coyote and raccoon. Garter snakes abound, as do lizards, frogs, salamanders and seasonally, butterflies and Paddle tailed darner and Sedge Darner dragon flies. Duck verities observed include Mallard, Bufflhead, and Wood.

Red tailed , Cooper and Sharp Shinned hawks, Turkey Buzzards, Bald Eagles, Falcons and Kestrels are raptors commonly observed as are Great Blue Herons, a variety of song birds, Stellar Jays, American Robin, Virginia Rail, Wood Peckers, Northern Flicker, Song Sparrow, Western Tanager , California Quail and Band Tailed Pigeons.

1. **WDFW and Thurston County Species of Local Importance found on the parcel:**

- Northern Harrier hawk
- American Bittern
- Short eared owl
- American Kestrel

- Bald eagle
- Band-tailed pigeon
- Great Blue Heron
- Peregrine Falcon
- Red Tailed Hawk
- Bufflehead Duck

Native plant species include Red Alder, vine maple, black cottonwood, western red cedar, hemlock, , pine, fir willow (Salix), Douglas Fir, sedge (carex), common camas, meadow foxtail, native trailing blackberry (and invasive Himalayan back berry), Oregon Grape, foxglove, sword ferns, lady ferns, and a variety of mosses, lichens and mushrooms.

Area loss of Habitat

Recent DNR Approved timber harvests have caused a reduction in local habitat. DNR Forest Practices Applications 2421989 and 2422962. (Attachment D).

CAPEN DNR FPA 2421989 : Timber harvest 104 acres, July 2021.

BALD HILL DNR FPA 2422962 : Timber harvest 41 acres, 2022.

These recent timber harvests caused a reduction of habitat and the wildlife has increased on the subject parcel as it is one of the only large parcels without domestic livestock. This loss of near habitat resulted in wildlife seeking refugia in the 76 acres of the subject parcel.

Subject Matter Experts

On February 2, 2024 Washington State department of natural Resources Biologist Ken Bevis made site visit to the parcel to verify wildlife habitat and assisted in the creation a Habitat Management Plan. (Biologist report = Appendix A).

On February 15 and February 28, 2025 Wetland Specialist Alex Callendar of Land Service Northwest(LSNW)completed site visits to the parcel. LSNW's Wetland Assessment and Delineation for parcel 22609310000 was completed on April 28, 2025.
(Wetland Assessment and Delineation =Appendix B).

Thurston County Priorities Alignment

Classification of this parcel as Open Space aligns with the following Thurston County priorities:

*I: General Provisions, Chapter 24.01 Thurston County Code**

B: Identify and protect the functions and values of unique, fragile and vulnerable elements of the environment such as fish and wildlife habitats, wetlands, and other ecosystems.

II: Per Thurston County Comprehensive Plan / Natural Resource Lands - PC Packet 05-03-2023- Agriculture Zoning Update page 103 of 187

"Item 2. Commercial farmland owners should be encouraged to retain their Lands in commercial farm production and enroll their land in the Open Space Farm and Agriculture Tax Program."

Item 3. Farmland no longer meeting commercial requirements for current use agriculture should be encouraged to enroll their Land in the Open Space Tax Programs Farm and Agriculture Conservation land."

Item 7/8. The County should work with conservation groups and farmland owners to encourage the participation in voluntary programs for the conservation of agricultural
working lands

Strategic Initiative # 7: To balance development with the preservation of the County's rural charater, natural areas, and open space.

*Carry out the goals and policies of the Thurston County Comprehensive Plan.

June 4 2025

Habitat Management and Farm and Agricultural Conservation Land Recommendations

Thurston County Parcel 22609310000

Per Washington Department of Fish and Wildlife (WDFW) Priority Habitats "All vegetated wetlands are by definition a priority habitat."

In order to preserve the functions served by the wetlands and dry uplands the property will be managed to reduce any potential risk to habitats.

Actions:

Prevent the spread of invasive plants, target canary reed grass and Scotch broom. The owner will manage noxious weeds within 200 feet of the freshwater ponds and ditch to ensure the viability of sensitive native aquatic habitats.

Use hand and mechanical means, such as mowing to assist in the spread of invasive species.

All riparian zones should be left undisturbed. The Aspen stands within these areas will continue to grow and further priority habitat.

Pesticides and herbicides will not be used in the Open Space areas. This is in keeping with the honey bee rearing business on site.

If planting trees in wetland areas use native tree species including western red cedar. when planting in the uplands/southern portion use mixed coniferous trees- Douglas firs, Grand Fir, Frasier Fir, Hemlock, leave some areas unplanted to create diversity in the stand.

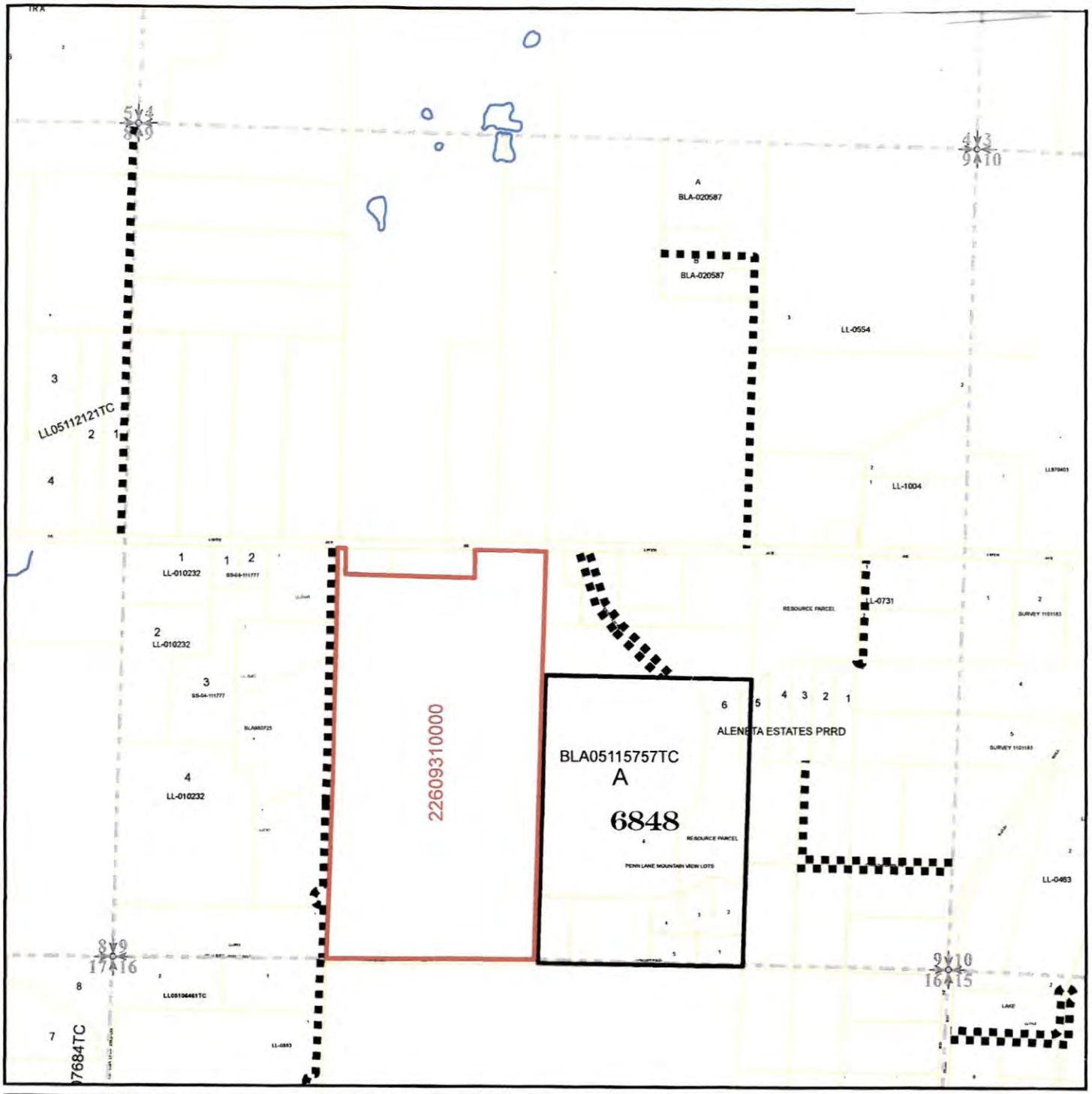
Leave downed snags and logs for habitat, including the large stump piles.

Retain preferred species of understory shrubs such as wild rose, service berry, red flowering current and others that bear fruit for wildlife.

Agricultural activities will not cause permanent conversion of critical areas through actions such as filling, ditching, draining or clearing.

Implementation date to coincide with approval of Open Space classification . A five year review period over the next 20 years is recommended.

Attachment A



THURSTON COUNTY

SECTION: s09162e

Parcel Data Current as of 11/13/2023

Subject Parcel

Parcel Boundaries

Sections Lines

NORTH

500 0 500

Feet

SUBJECT PARCEL LEGAL DESCRIPTION: The Northeast Quarter of the Southwest Quarter and the Southeast Quarter of said Section 9, Township 16 North, Range 2 East W.M. Except a strip as described as follows:

Beginning 50 feet East of the Northwest corner of the Northeast Quarter of the Southwest Quarter of said Section 9; thence east on King Road 851 feet; thence south 154 feet; thence west 851 feet; thence north 154 feet to the point of beginning.

Map created by SLS 11/13/2023

22609310000

Measurements

Subject Parcel

Other Parcels

The information included on this map has been compiled by Thurston County staff f
sources and is subject to change without notice. Additional elements may be present in r
represented on the map. Ortho-photos and other data may not align. The boundaries
datasets are approximate. This document is not intended for use as a survey product.

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representations or warranties, express or implied, as to accuracy, completeness, timeline
use of such information. In no event shall Thurston County be liable for direct, i
consequential, special, or tort damages of any kind, including, but not limited to, los
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responsibility from the map and the data contained within. The burden for determining
accuracy with the user and the user is solely responsible for understanding the accuracy
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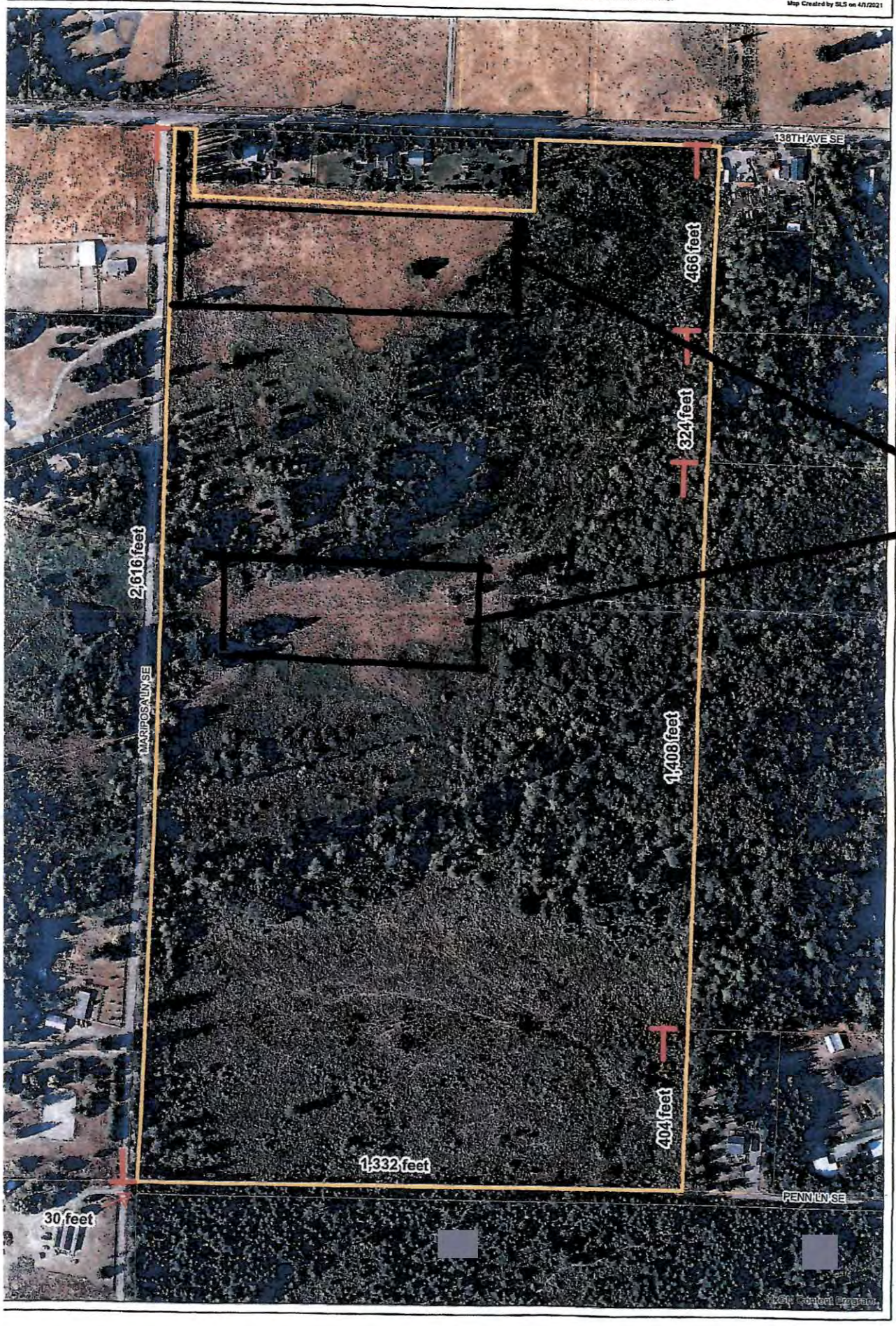
Map Created by SLS on 4/1/2021

Attachment B



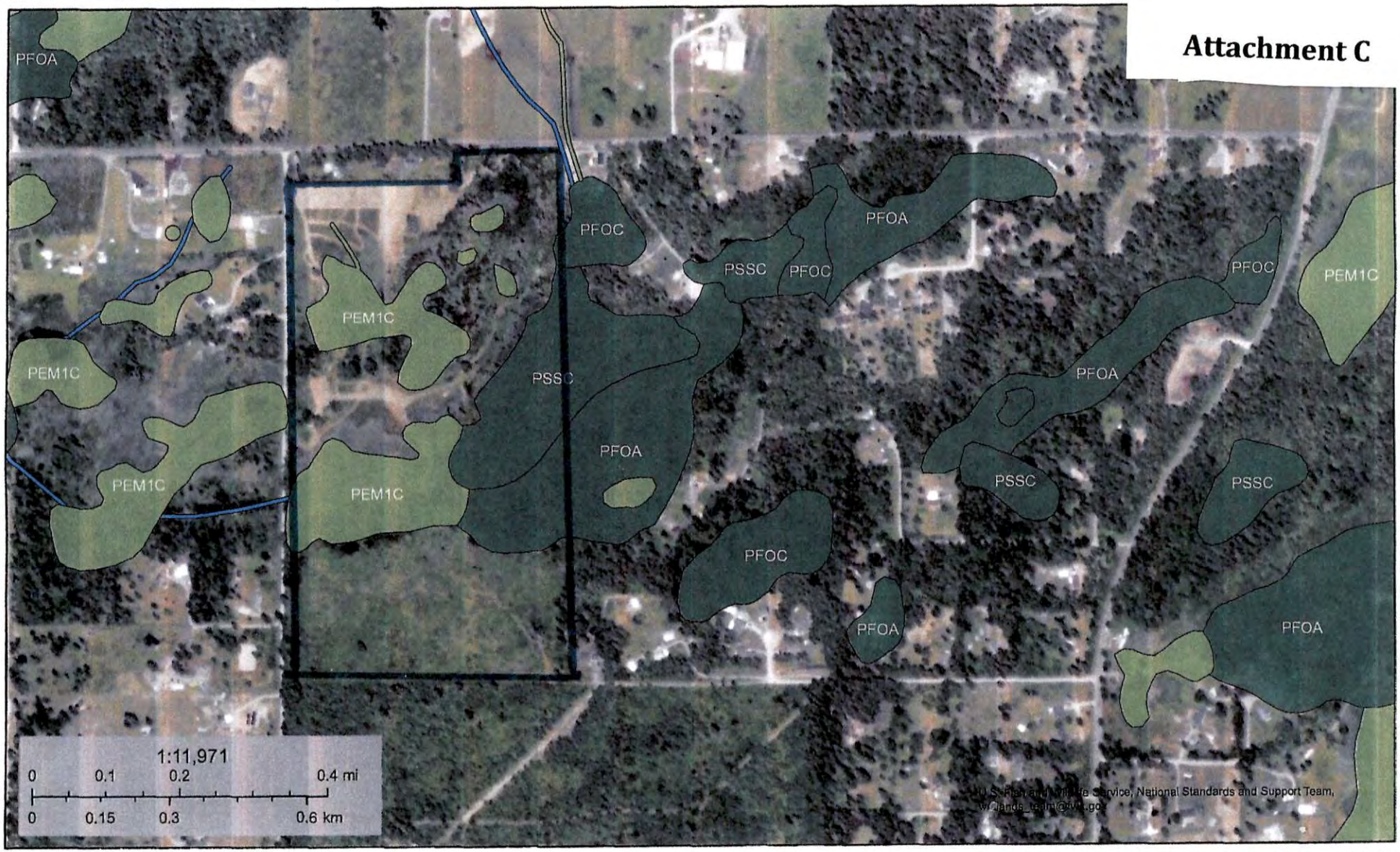
Farm and Conservation Agricultural Land Areas

U.S. Fish and Wildlife Service

National Wetlands Inventory

National Wetlands Inventory Thurston Cou

Attachment C



December 9, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

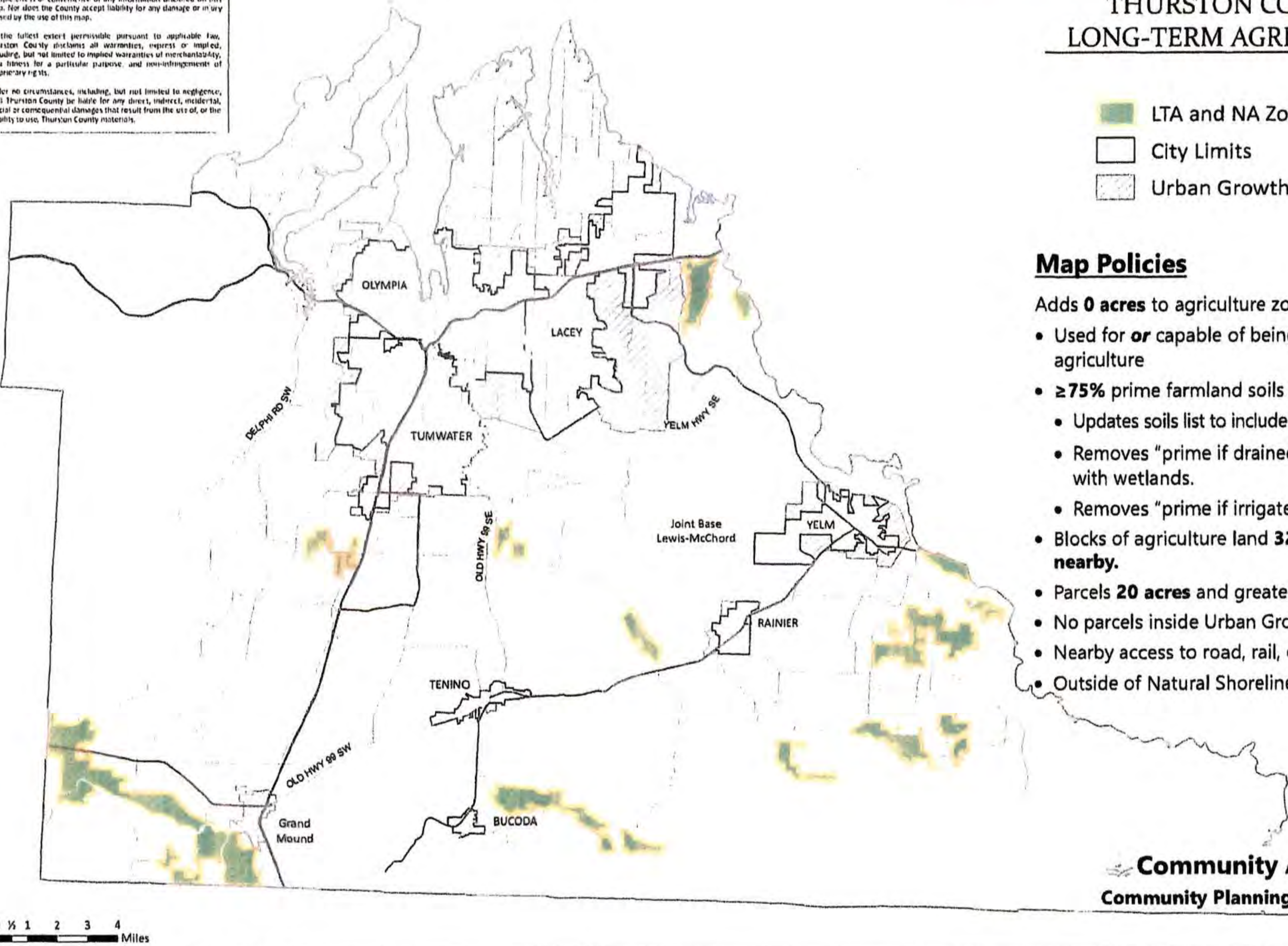
Proposed Agriculture Zoning Expansion Map

Attachment D

BoCC Briefing Draft - October 2, 2024

DRAFT For Discussion Purposes Only DRAFT

THURSTON COUNTY
LONG-TERM AGRICULTURE



- LTA and NA Zoning
- City Limits
- Urban Growth Area (UGA)

Map Policies

Adds **0 acres** to agriculture zoning.

- Used for ***or*** capable of being used for commercial agriculture
- **≥75%** prime farmland soils (**2023** USDA Soil Survey)
  - Updates soils list to include new prime soils
  - Removes "prime if drained" soils when overlapping with wetlands.
  - Removes "prime if irrigated" soils.
- Blocks of agriculture land **320+ acres or 200 if nearby.**
- Parcels **20 acres** and greater
- No parcels inside Urban Growth Areas
- Nearby access to road, rail, or air routes to markets
- Outside of Natural Shoreline Environments

THURSTON COUNTY

Community Agriculture Program

Community Planning & Economic Development

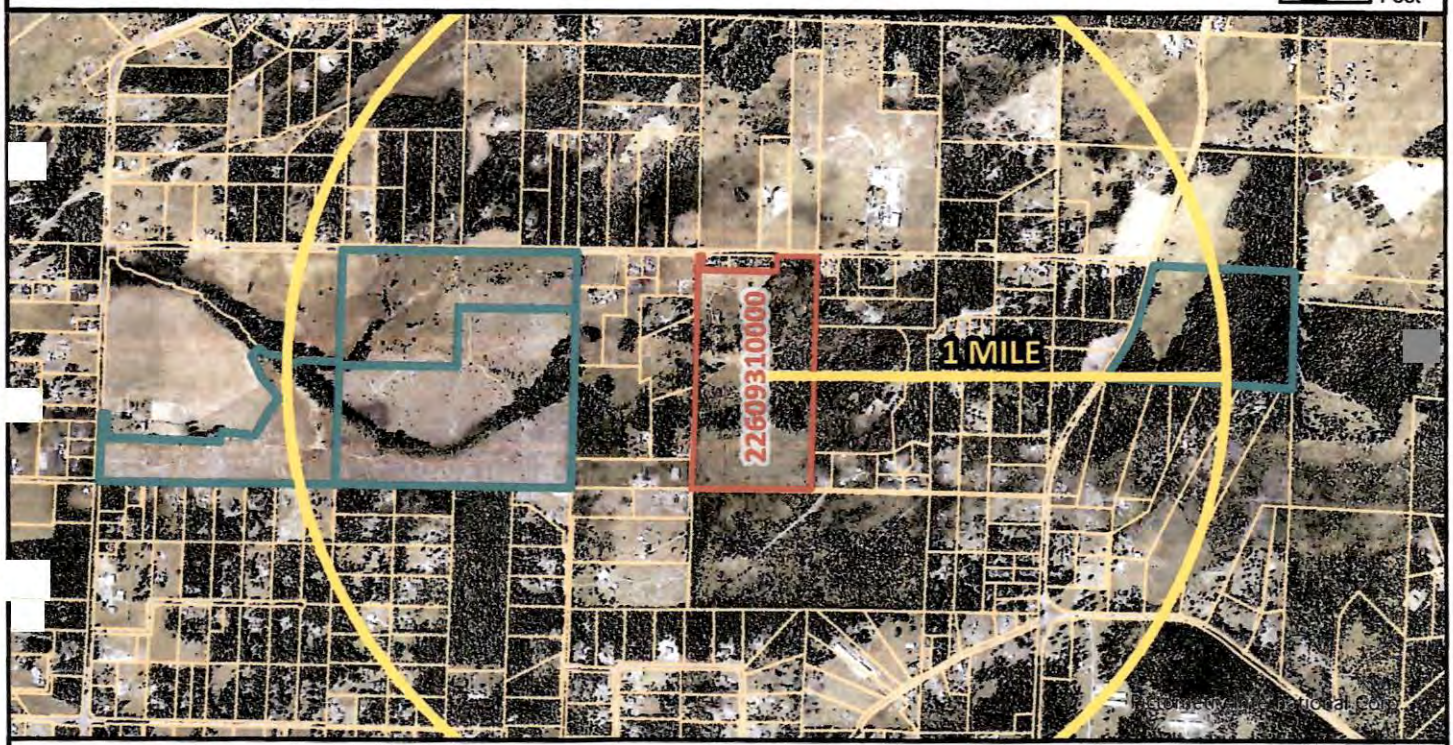
Attachment E

2018 Aerial Imagery

500 0 500
Feet

2022 Aerial Imagery

500 0 500
Feet



THURSTON COUNTY

PARCELS LOGGED IN 2018-2022 WITHIN 1-MILE RADIUS: HABITAT LOSS

- Parcel 22609310000
- Logged Parcels
- Parcel Boundaries

NORTH

THURSTON COUNTY

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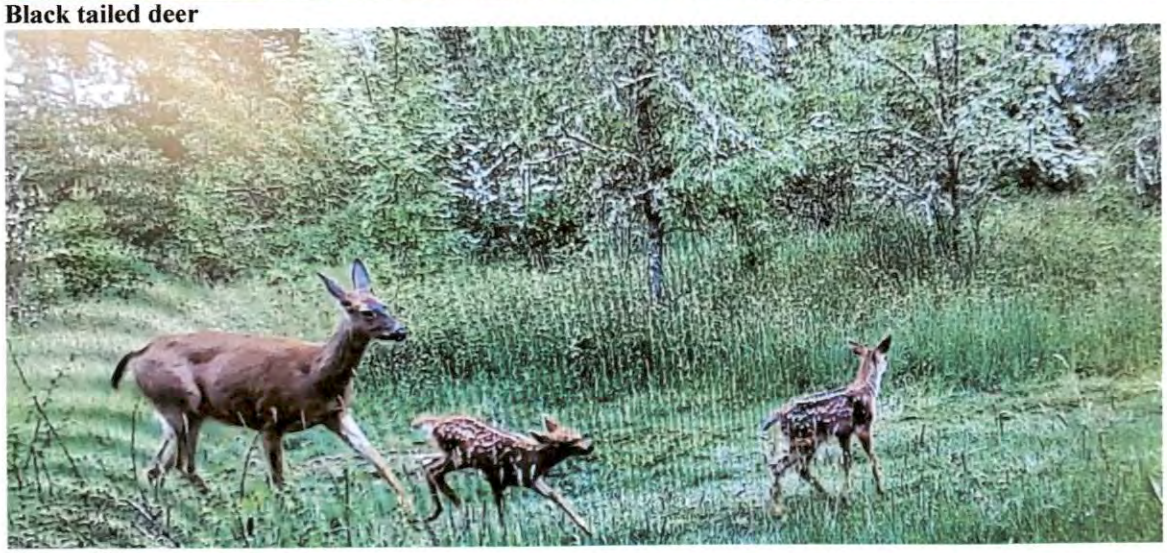
Map created by SLS 11/13/2023

Elk herd

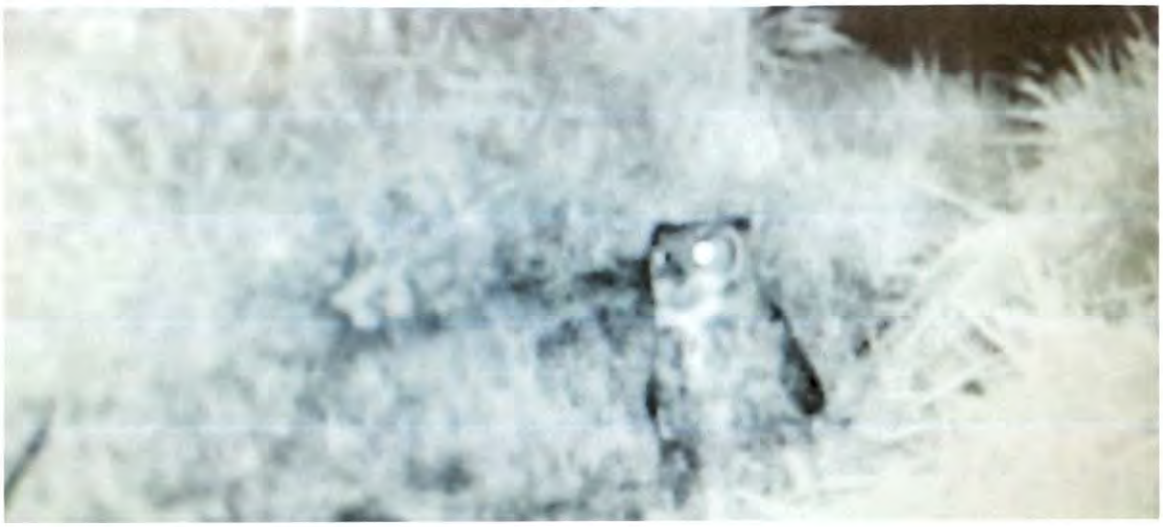
Black tailed deer



Doe and Fawns

Bull Elk

Douglas Squirrel



Short - Eared Owl

Musk Rat Burrow

APPENDIX A

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Wildlife Site visit Date: __2/7/24__ Names: Bevis

Landowner name ____Cindy and Roland Gorgas_____

Email address __whatnotdog@gmail.com_____

Address/Location ___near Rainier, E. Thurston Co_____Acres __76___

Objectives/ Plan Status
Objectives: Wildlife Habitat and Forest restoration. Long term conservation
No plan yet. Working on Open Space status for county land use designation.

· Species on Property (Observed or expected).
Elk, BT deer, black bear, cougar, skunk, raccoon, possum, band tailed pigeons, salamanders, chorus frogs

· Site description and condition of key wildlife habitat components
Old farm with hay pastures still in use and old abandoned home sites, overgrown with wild woody vegetation including old fruit trees, likely over 100 years old. Vernal wetlands abundant. Water deep in one old pond. Lots of Oregon Ash, cottonwood, aspen. Back third of property was logged in 2007 and left unplanted. Well developed brush layer. A few Doug fir seedlings naturally established. Slash piles still there.

Property is largely flat, and pools of water are in natural low areas. Inflow is from adjacent forest, pastures and roadside ditched flows, out into these natural wetland areas. Patches with older trees in between wetlands and meadows. One home near county road.

Upland forest patches have Douglas fir, aspen and some lodgepole (shore) pine. Looks like all naturally regenerated forests and abandoned farmland, except hay pastures have continued to be hayed each year.

Lots of elk use. Parcel has high conservation value due to the wetlands and diverse vegetation present. Lots of opportunities for restoration and enhancement here.

· Describe any management practices to protect, improve, or restore wildlife habitat or to control damage.

Wetlands: Maintain flows into wetlands wherever possible. Consider a wetland restoration project whereby reed canary could be controlled, and possibly new flow patterns established.

Control scotch broom aggressively.

Retain largest trees, including dead ones.
Plant cedar, maybe sitka spruce, with protective cages near wetlands.
Establish Oregon White oak in open areas with protective cages.

Provide additional down wood cover near wetlands for amphibians. Maybe use some big pieces out of the old slash piles and move them closer to water.

When planting in old clearcut, leave some areas unplanted, deliberately creating diversity in the stand. Mix species. Grand fir, ponderosa pine, lodgepole pine to be considered. Keep big leaf maples.

Anticipating potential loss of ash with imminent arrival of Emerald Ash Borer, focus on planting appropriate wet site species near groves of ash. Include W. red cedar.

Strategize on long term easement or other forms of conservation land status.

- Key Landowner elements

Recent purchase of property. Interested in long term conservation. Intend to write Stewardship Plan.

Photos:

One of many wetland areas on the Gorgas property.

Gorgas wetland on Yelm Creek.

Natural Oregon ash. One of many.

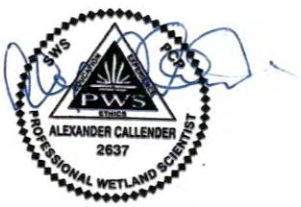
Gorgas hay meadows and wetlands. No doubt excellent habitat for amphibians. Intended to be kept as grassy areas. Could be pollinator gardens!

Back portion of the property logged in 2015. Full of brush. Reforestation project would be very difficult, but possible. Suggest leaving some areas as shrubs. Remove scots broom.

APPENDIX B

Gorgas Wetland Assessment and Delineation

Prepared for
Roland and Cindy Gorgas
April 28, 2025



Land Services Northwest
Alex Callender MS, PWS
120 State Ave NE PMB 190, Olympia, WA, 98501
360.481.4208

Executive Summary

Site Name: Gorgas Wetland Delineation

Parcel Number: 22609310000

Site Location: xxx 138th Avenue SE Yelm WA 98597

Acreage: 76.96 Upland: **Wetlands**: 56.82 **Uplands:** 20.14 acres

Legal Description: Section 09 Township 16 Range 2E E2 SW4 LESS PTN ALG N LN AND CO RD

Project Staff: Alex Callender MS, PWS

Field Survey Conducted: February 15 and February 28, 2025

Findings: One wetland, Wetland A, and one stream, Yelm Creek, were discovered on and offsite during the survey. Wetland A was rated as a Category II wetland with an overall score of 22 and a habitat score of nine. Wetlands in Thurston County with a habitat score of nine require a 300 ft buffer with a fifteen-foot building setback. Yelm Creek is found within the boundary of the wetland and is a type F stream 5-20 ft wide with a 200-foot buffer.

Project Description: There is no project at this time. The wetland delineation and assessment for wetland type(s), area, and habitat is provided. The applicant is providing this document to develop a conservation plan for the property.

Impacts: There is no project and therefore no impacts proposed. The applicant will be managing the property to conserve and maximize natural resources, and this will be part of the baseline information of that plan.

Table of Contents

1.0 INTRODUCTION

This report is the result of a critical areas study of the 76.96- acre parcel #22609310000 at xxx 138th AVE SE Yelm, WA with the legal description of Section 09 Township 16 Range 2E E2 SW4 LESS PTN ALG N LN AND CO RD in Thurston County (**Figure 1**):

This report was prepared to satisfy the critical areas review process required by the Thurston County Development Regulations Title 17 Environment and Chapter 24 Critical Areas

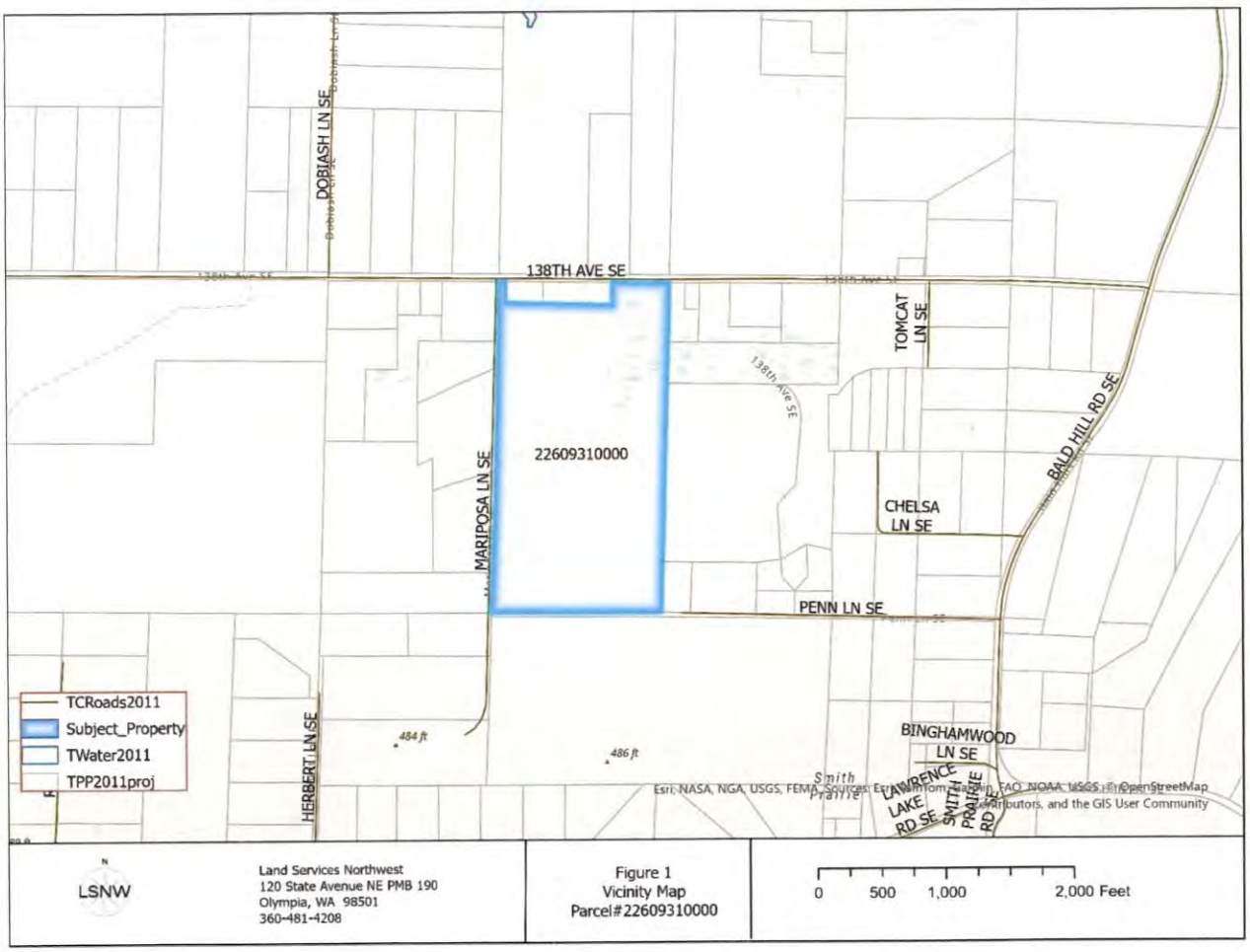


Figure 1-Vicinity Map

2.0 GENERAL DESCRIPTION AND LAND USE

2.1 Historical and Current Land Use

Wetlands and pastures occupy the center of property .Historically the pasture areas of the parcel were used for farming and hay production continues at the present time. The southern portion is mostly forestland. This area was clear cut in 2007. The property is zoned Long Term Agriculture (LTA) as are some large, surrounding parcels to the North and South. The Zoning East and West is RRR 1/5 and includes some single family residences. A private road borders the Western property line of the parcel.

The southern portion is mostly forestland. The central portion is wetland and upland mix and the northern portion has wetland and There is long-term agriculture to the north and south Mariposa Lane to the west, single family residences with outbuildings to the west and single-family to the east with forest (**Figure 2**).

Land Services NW 120 State Avenue NE Olympia, WA 98501 360-481-4208	N	Figure 2 Current Conditions Parcel #22609310000
0 187.5375 750 US Feet		

Figure 2 - Current Conditions

3.0 METHODOLOGY

3.1 Existing Information Review

Background information on possible wetlands was reviewed prior to field investigations and included the following:

National Wetlands Inventory (NWI) Map, USFWS Shapefile Data (**Appendix B**)

Thurston County Area Soil Survey, Soil Conservation Service (U.S. Department of Agriculture, 1973) National Resource Conservation Service Shapefiles (NRCS Soils Data Mart, 2006) (**Appendix C**)

Thurston County Geodata Wetland Inventory (**Appendix D**)

USGS 7.5 Minute Quadrangle Topographic Maps (**Appendix E**)

WDNR Forest Practices Activity Map **(Appendix F)**

Washington Department of Fish and Wildlife Priority Habitats and Species Database and Salmonscape (**Appendix G**)

NOAA Now Precipitation Data (**Appendix H**)

Washington Department of Natural Resources Natural Heritage Database

United States Hydric Soils List (U.S. Department of Agriculture 1991)

Thurston County Code Chapter 24

3.2 Analysis of Existing Information

The following existing information was reviewed to gain a better understanding of on-site conditions and the position in the landscape.

National Wetland Inventory (NWI) Map

The National Wetland Inventory (NWI) map (**Appendix B**), developed by the U.S. Fish and Wildlife Service (USFWS), shows the following wetlands on and within 315 feet of the subject property:

- Palustrine Emergent Persistent Seasonally Flooded (PEM1C)
- Palustrine Scrub Shrub Seasonally Flooded (PSSC)
- Palustrine Forested Temporarily Flooded (PFOA)
- Palustrine Forested Seasonally Flooded (PFOC)
- Riverine Intermittent Streambed Seasonally Flooded (R4SBC) (Yelm Creek)

NRCS Soils Map

The Natural Resources Conservation Service (NRCS) has mapped the site (**Appendix C**) as containing:

- Everett very gravelly sandy loam, 8 to 15 percent slopes
- Kapowsin silt loam, 0 to 3 percent slopes

- Mukilteo muck (Hydric)
- Norma silt loam (Hydric)
- Shalcar muck (Hydric)

Everett very gravelly sandy loam, 8 to 15 percent slopes

Map Unit Setting

- *National map unit symbol:* 2t62b
- *Elevation:* 30 to 900 feet
- *Mean annual precipitation:* 35 to 91 inches
- *Mean annual air temperature:* 48 to 52 degrees F
- *Frost-free period:* 180 to 240 days
- *Farmland classification:* Farmland of statewide importance

Map Unit Composition

- *Everett and similar soils:* 80 percent
- *Minor components:* 20 percent
- *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Everett

Setting

- *Landform:* Moraines, eskers, kames
- *Landform position (two-dimensional):* Shoulder, footslope
- *Landform position (three-dimensional):* Crest, base slope
- *Down-slope shape:* Convex
- *Across-slope shape:* Convex
- *Parent material:* Sandy and gravelly glacial outwash

Typical profile

- *Oi - 0 to 1 inches:* slightly decomposed plant material
- *A - 1 to 3 inches:* very gravelly sandy loam
- *Bw - 3 to 24 inches:* very gravelly sandy loam
- *C1 - 24 to 35 inches:* very gravelly loamy sand
- *C2 - 35 to 60 inches:* extremely cobbly coarse sand

Properties and qualities

- *Slope:* 8 to 15 percent
- *Depth to restrictive feature:* More than 80 inches
- *Drainage class:* Somewhat excessively drained
- *Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 in/hr)
- *Depth to water table:* More than 80 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Available water supply, 0 to 60 inches:* Low (about 3.2 inches)

Interpretive groups

- *Land capability classification (irrigated):* None specified
- *Land capability classification (nonirrigated):* 4s
- *Hydrologic Soil Group:* A
- *Ecological site:* F002XA004WA - Puget Lowlands Forest
- *Forage suitability group:* Droughty Soils (G002XS401WA), Droughty Soils (G002XF403WA), Droughty Soils (G002XN402WA)

- *Other vegetative classification:* Droughty Soils (G002XS401WA), Droughty Soils (G002XF403WA), Droughty Soils (G002XN402WA)
- *Hydric soil rating:* No

Kapowsin silt loam, 0 to 3 percent slopes

Map Unit Setting

- *National map unit symbol:* 2nd96
- *Elevation:* 50 to 900 feet
- *Mean annual precipitation:* 30 to 50 inches
- *Mean annual air temperature:* 48 to 52 degrees F
- *Frost-free period:* 150 to 220 days
- *Farmland classification:* All areas are prime farmland

Map Unit Composition

- *Kapowsin and similar soils:* 85 percent
- *Minor components:* 8 percent
- *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Kapowsin

Setting

- *Landform:* Till plains
- *Parent material:* Compact basal till

Typical profile

- *H1 - 0 to 4 inches:* silt loam
- *H2 - 4 to 22 inches:* silt loam
- *H3 - 22 to 30 inches:* gravelly loam
- *H4 - 30 to 34 inches:* gravelly loam

Properties and qualities

- *Slope:* 0 to 3 percent
- *Depth to restrictive feature:* 20 to 40 inches to densic material
- *Drainage class:* Moderately well drained
- *Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)
- *Depth to water table:* About 12 to 24 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Available water supply, 0 to 60 inches:* Moderate (about 6.1 inches)

Interpretive groups

- *Land capability classification (irrigated):* None specified
- *Land capability classification (nonirrigated):* 3s
- *Hydrologic Soil Group:* C/D
- *Ecological site:* F002XA004WA - Puget Lowlands Forest
- *Forage suitability group:* Limited Depth Soils (G002XS301WA)
- *Other vegetative classification:* Limited Depth Soils (G002XS301WA)
- *Hydric soil rating:* No
- (G002XN202

Mukilteo muck, drained (Hydric)

Map Unit Setting

- *National map unit symbol:* 2ndc5
- *Elevation:* 0 to 1,000 feet
- *Mean annual precipitation:* 40 to 70 inches
- *Mean annual air temperature:* 48 to 52 degrees F
- *Frost-free period:* 150 to 250 days
- *Farmland classification:* Prime farmland if drained

Map Unit Composition

- *Mukilteo, drained, and similar soils:* 90 percent
- *Minor components:* 10 percent
- *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Mukilteo, Drained

Setting

- *Landform:* Depressions
- *Parent material:* Herbaceous organic material

Typical profile

- *Oa - 0 to 6 inches:* muck
- *Oe2 - 6 to 60 inches:* mucky peat

Properties and qualities

- *Slope:* 0 to 2 percent
- *Depth to restrictive feature:* More than 80 inches
- *Drainage class:* Very poorly drained
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)
- *Depth to water table:* About 0 to 24 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Available water supply, 0 to 60 inches:* Very high (about 26.9 inches)

Interpretive groups

- *Land capability classification (irrigated):* None specified
- *Land capability classification (nonirrigated):* 5w
- *Hydrologic Soil Group:* B/D
- *Ecological site:* R002XA003WA - Puget Lowlands Bogs and Fens
- *Forage suitability group:* Seasonally Wet Soils (G002XS201WA)
- *Other vegetative classification:* Seasonally Wet Soils (G002XS201WA)
- *Hydric soil rating:* Yes

Norma fine sandy loam

Map Unit Setting

- *National map unit symbol:* 2ndcb
- *Elevation:* 0 to 1,000 feet
- *Mean annual precipitation:* 35 to 60 inches
- *Mean annual air temperature:* 48 to 52 degrees F
- *Frost-free period:* 150 to 200 days
- *Farmland classification:* Prime farmland if drained

Map Unit Composition

- *Norma, fine sandy loam, and similar soils:* 90 percent
- *Minor components:* 10 percent

- *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Norma, Fine Sandy Loam

Setting

- *Landform:* Depressions, drainageways
- *Parent material:* Alluvium

Typical profile

- *H1 - 0 to 7 inches:* fine sandy loam
- *H2 - 7 to 25 inches:* fine sandy loam
- *H3 - 25 to 60 inches:* sandy loam

Properties and qualities

- *Slope:* 0 to 3 percent
- *Depth to restrictive feature:* More than 80 inches
- *Drainage class:* Poorly drained
- *Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 in/hr)
- *Depth to water table:* About 0 to 12 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* Frequent
- *Available water supply, 0 to 60 inches:* Moderate (about 8.4 inches)

Interpretive groups

- *Land capability classification (irrigated):* None specified
- *Land capability classification (nonirrigated):* 5w
- *Hydrologic Soil Group:* A/D
- *Ecological site:* F002XA007WA - Puget Lowlands Wet Forest
- *Forage suitability group:* Wet Soils (G002XS101WA)
- *Other vegetative classification:* Wet Soils (G002XS101WA)
- *Hydric soil rating:* Yes

Shalcar muck

Map Unit Setting

- *National map unit symbol:* 2nd7s
- *Elevation:* 50 to 700 feet
- *Mean annual precipitation:* 35 to 55 inches
- *Mean annual air temperature:* 48 to 52 degrees F
- *Frost-free period:* 150 to 190 days
- *Farmland classification:* Prime farmland if drained

Map Unit Composition

- *Shalcar and similar soils:* 90 percent
- *Minor components:* 10 percent
- *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Shalcar

Setting

- *Landform:* Depressions
- *Parent material:* Herbaceous organic material over alluvium

Typical profile

- *Oa - 0 to 24 inches:* muck
- *H2 - 24 to 60 inches:* silty clay loam

Properties and qualities

- *Slope:* 0 to 2 percent
- *Depth to restrictive feature:* More than 80 inches
- *Drainage class:* Very poorly drained
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)
- *Depth to water table:* About 0 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* Frequent
- *Available water supply, 0 to 60 inches:* Very high (about 18.0 inches)

Interpretive groups

- *Land capability classification (irrigated):* None specified
- *Land capability classification (nonirrigated):* 5w
- *Hydrologic Soil Group:* C/D
- *Ecological site:* R002XA003WA - Puget Lowlands Bogs and Fens
- *Forage suitability group:* Wet Soils (G002XS101WA)
- *Other vegetative classification:* Wet Soils (G002XS101WA)
- *Hydric soil rating:* Yes

Thurston County Geodata Wetland Inventory

The Thurston County Geodata has a mapping tool that depicts various critical areas such as streams and wetlands. (**Appendix D**). This site shows the following wetlands on and within 315 of the subject property:

- Palustrine Emergent farmed (PEMf)
- Palustrine Emergent/Forested (PEM/FO)
- POW Palustrine Open Water
- Riverine Intermittent (R4) (Yelm Creek)
- Palustrine Forested/Scrub Shrub (PFO/SS)

USGS 7.5 Minute Topo Map

The USGS has topographical maps that depict natural and artificial features on the landscape including wetlands. (**Appendix E**). This map shows wetlands in the vicinity of the subject property.

WADNR Forest Practices Map

The WADNR Forest Practices Division has a mapping tool for determining predictive stream types in accordance with attributes for WAC222-16-32 WATER TYPING. (**Appendix F**). This map shows wetlands and a Type Unknown stream on and in the vicinity of the subject property.

WDFW Priority Habitats and Species Inventory (PHS) and Salmonscape

The Department of Fish and Wildlife maintains an inventory of priority habitats and species information (**Appendix G**).

The PHS database shows a waterfowl concentrations. Waterfowl are often seen in the wetland.

The WDFW SalmonScape does not show any fish usage in the vicinity of the subject property.

NOAA NOW Precipitation Data

NOAA maintains a database that graphs the current precipitation against the wettest, driest, and normal accumulations of record. **(Appendix H).** This data shows a nearly record level of below normal precipitation during the study period.

3.3 Field Investigation

Determination Guidelines

Land Services Northwest based its wetland identification and delineation upon the 1987 Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) and the regional specificity found in Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (USACE, 2010). Generally, as outlined in the manuals, wetlands are distinguished from other landforms by three criteria: 1) hydrophytic vegetation, 2) hydric soils, and 3) wetland hydrology.

General Field Guidelines

Plant species were identified according to the taxonomy in *Flora of the Pacific Northwest* (Hitchcock and Cronquist, 1973), and the wetland status of plant species was assigned according to*: The National Wetland Plant List: 2016* (Lichvar, 2016). Wetland classes were determined by the U.S. Fish and Wildlife Service's system of wetland classification (FGDC, 2013). The wetland determination was based mainly on soils, vegetation, and hydrology characteristics indicative of wetland conditions.

The Corps Manual and Supplement describes soil, vegetation, and hydrological indicators of wetlands. A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper par (National Technical Committee for Hydric Soils, 1994). Anaerobic conditions cause redoximorphic features to develop, which can be evidenced through the observation of mottling or gleying in the soil. Soils are hydric if they match the indicators in the supplement or meet the technical definition.

A soils evaluation was performed to determine if the area contained hydric soils. Additional test plots were sampled to gage possible wetland indicators and characteristics. Soils are normally excavated to 18 inches or more below the surface within a test pit to evaluate soil characteristics and hydrological conditions in both wetland and upland areas. Soil chroma (color) is evaluated using the *Munsell Color Chart* (Munsell Color, 1988).

The COE describes a wetland rating system for plants. Each species is assigned a probability of occurrence within wetlands, which is referred to as its wetland status. The wetland plant indicator system is as follows:

Table 1 Indicator Status Ratings

Indicator Status	Abrv.	Definitions - Short Version (ERDC/CRREL TN-12-1)
Obligate	OBL	Almost always occur in wetlands.
Facultative Wetland	FACW	Usually occur in wetlands but may occur in non-wetlands.
Facultative	FAC	Occur in wetlands and nonwetlands.
Facultative Upland	FACU	Usually occur in non-wetlands but may occur in wetlands.
Upland	UPL	Almost never occur in wetlands.
		(USACE, 2016)

In general, under the Federal methodology, more than 50 percent of the predominant plant species within a test plot must be rated FAC or wetter (i.e., FACW, OBL) to satisfy the wetland criteria for hydrophytic vegetation. Dominant species are those when ranked comprise 50% of the total or those that have a percent cover greater or equal to 20 percent within the test plot. Only dominant plant species were considered in the data analysis.

If wetland hydrology, including pooling, ponding, and soil saturation, is not clearly evident, hydrological conditions may be observed through surface or soil indicators. Indicators of hydrological conditions include drainage patterns, drift lines, sediment deposition, watermarks, historic records, visual observation of saturated soils, and visual observation of inundation.

3.4 Wetland Study

Field Survey

A wetland reconnaissance was performed on February 15, 2025 to identify wetlands present on the subject property. Observations were made of the general plant communities, wildlife habitats, and the locations of potential streams and wetland areas. Present and past land-use practices were noted, as were significant geological and hydrological features.

Once likely wetland areas were located, the Routine Onsite Determination Method was used to identify the presence of wetland parameters and to delineate the outer edge of the wetlands using the procedures outlined in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). The Routine Onsite Determination Method was used in areas that maintained normal circumstances, were not significantly disturbed, and were not potential problem areas. A formal wetland delineation was performed on February 15, 2025 and February 28, 2025, to flag and document on-site wetlands and to identify and map off-site wetlands within 315 feet of the subject property as we are able.

Test pits were dug on February 15, 2025, and February 28, 2025, to develop a better understanding of soil profiles onsite. Soils were excavated to 18 inches or more below the surface within a test pit to evaluate soil characteristics and hydrological conditions throughout the site. Soil chroma (color) is evaluated using the *Munsell Color Chart* (Munsell Color, 1988). These results were entered in wetland data sheets **(Appendix I) (Figure 3).**

Figure 3 – Test Pit Locations

4.0 RESULTS

4.1 Existing Conditions

The wetland starts at a culvert to the east flows south along the eastern property line then west to the culvert at the private road where it continues west. The wetland edge seems well established and after the rainy period it did not appear that any areas were wetter than normal as the hydrophytic vegetation was well established along the wetland edge. Grass and sedges were well established. The orientation of the swales is in an east west manner which contrasts with other parts of the county which are oriented in a north-south direction likely due to the glaciation off of Mt Rainier that cut across the land here. The water flows in an east west direction toward offisite Yelm Creek, which is a type F stream. This stream will be covered in more detail in this report. Area uplands contain Douglas fir (Pseudotsuga menziesii; FACU), Salal (Gaultheria shallon; FACU), Beaked hazelnut (Corylus cornuta; FACU), Sword fern (Polysticum munitum; FACU), and Mahonia nervosa; FACU). The area has extensive patches of Himalayan blackberry (Rubus armeniacus; FAC), Evergreen blackberry (Rubus lacianatus; FAC). In the southern portion of the property south of Yelm Creek, the topography rises and the highest point of the property is in the south.

4.2 Wetlands

Wetland A

Wetland A is an approximate 56.81 acre on and off-site Depressional HGM wetland. The wetland hydrology is from a combination of precipitation, surface water, and high groundwater. The flow is complex as it runs north and has been ditched to the east. The outlet at Mariposa road did not appear to constrict flow very much at all, however, it was mentioned that during the heavy rains in 2007 the road did flood so at times the flow can be larger than what the culvert under the road will handle and the road flooded. We started the study after a relatively dry winter and then by the end of the study there were a few sustained rains that appeared to result in a more typical extent of winter flooding, but not beyond the extent of the hydrophytic vegetation which seemed to be a good indicator of the typical wetland edge as the water did not extend into upland vegetation much at all.

Plants

Plants in Wetland A are predominantly Shore pine (Pinus contorta; FAC), Oregon ash *(Fraxinus latifolia;* FACW*), Black cottonwood (Popupulous balsamifera; FAC),* (Pacific crabapple (*Malus fusca*; FACW), Cratageus douglasii; FAC), Cluster rose (*Rosa pisocarpa;* FAC*),* Reed canary grass *(Phalaris arundinacea;* FACW*),* Hardhack *(Spiraea douglasii;* FACW), Slough sedge *(Carex obnupta;* OBL*), Colonial bentgrass (Agostis capillaris; FAC) (Reed canary grass; FACW), Creeping buttercup (Ranunculus repens; FAC)* and

Soils

The soils in Wetland A are composed of a dark 10YR 2-3/1 layer from 0 to 2 inches, with 10YR4/2 layer with 10YR4/6 redox features from 2 to 6 inches, and a 10YR5/1 layer with 10YR5/6 redox features from 6 to 18 inches.

Hydrology

Hydrology was observed at the surface and at a depth of 6 inches.

5.0 WETLAND FUNCTIONAL VALUES

5.1 Wetland Functional Analysis Methodology

Wetlands, in general, provide many valuable ecological and social functions, including 1) stormwater storage, 2) groundwater recharge, 3) erosion control, 4) water quality improvement, 5) natural biological support, 6) overall habitat functions, 7) specific habitat functions, and 8) cultural and socioeconomic value.

Several procedures have been developed for assessing the importance and magnitude of functions and include the Washington Functional Assessment Method (WAFAM) Wetland Evaluation Technique, the Hydrogeomorphic Assessment Method the Habitat Evaluation Procedure (HEP), and numerous regional and/or local procedures. However, none of these methods were consistent with the needs of this project.

Wetland functions were also semi-quantitatively assessed using information gathered while performing the ECY Wetland Rating System for Western Washington (Hruby, 2014). The scores from the analysis of the wetland are found in Appendix H. This method is a comprehensive approach requiring substantial data input and assessment of onsite and landscape functions. The descriptions of wetland functions and the factors and parameters considered by that method are very helpful in interpreting the functioning of the subject wetlands and buffer areas. The methodology is scientifically based, in that its application requires a prior understanding of how wetlands function. Advanced experience, training and scientific objectivity of a wetland scientist applying the method is essential for an accurate assessment. Alex Callender has attended and received credit for the training in this method.

5.2 Wetland Functions

Wetland A

Wetland A is a flow through depressional wetland along Yelm Creek. Although it is fed by the creek, it has extensive depressions that hold water and the outlet between the uplands on the eastern side and the culvert on the western side holds water in the depression. The wetland rated as a Category II wetland with a habitat score of nine (HHH).

Water Quality

Wetland has an intermittently flowing stream or ditch (Yelm Creek). The soil below 2" of the surface is organic muck. The wetland dries up in the summer dry season and greater than ½ of the wetland is seasonally ponded. The wetland does not receive stormwater discharges. More than 10 percent of the area within 150 feet of the wetland is in land use that generated pollutants including mowed grass, residential areas and roads. The neighbor has farm animals that use the creek. There are septics within 250 feet of the wetland. The wetland is in a basin or sub-basin where an aquatic resource is on the 303d list. The wetland does not discharge to any waters on the 303(d) list. The site has not been identified in a watershed as important for improving water quality.

Hydrologic

The wetland has an intermittently flowing stream or ditch. Marks of ponding are between 2ft to less than 3ft from the surface or bottom of the outlet. The area of the basin is 10 to 100 times the area of the unit. The wetland does not receive stormwater discharge. Greater than 10 percent of the area within 150 ft of the wetland is in land uses that generate excessive run-off. Less than twenty-five percent of the wetland is covered with intensive human land uses. Surface area flooding problems are in

a sub-basin further down-gradient includes high groundwater flooding. The site has not been identified as important for flood storage in a regional flood control plan.

Habitat

The wetland rates high for the structure of the plant community as it contains 5 structures, which are aquatic bed, emergent, shrub-scrub, forested, and forested that contains 3 out of 5 strata. The wetland is composed of 4 hydroperiods, which are permanently flooded, seasonally flooded, saturated only and and an intermittently flowing stream in and adjacent the wetland. The wetland contains greater than 19 different plant species and has high interspersion of habitats. The wetland contains 5 special habitat features, which are large, downed woody debris within the wetland, standing snags, undercut banks for at least 6.6 feet and/or overhanging plants for at least 3.3 feet, stable steep banks of fine materials that might be used by beavers or muskrats for denning, and at least a quarter acre of thin-stemmed, persistent plants for amphibians. Greater than a third of the 1 kilometer polygon is accessible habitat. Undisturbed habitat is between 10-50% of the 1 kilometer polygon in between 1 and 3 patches. Less than 50% of the 1 kilometer polygon is high intensity land uses. The wetland contains priority habitat, which are instream, riparian, and snags and logs.

6.0 REGULATORY CONSIDERATIONS

6.1 Thurston County Regulations

Wetlands

24.30.045 - Wetland buffers—Standard width.

Table 24.30-1 identifies the standard buffer widths. Buffer widths are specified for both water quality and habitat protection. The widest of the applicable buffers under habitat and water quality applies.

Table 24.30-1. Standard Wetland Buffer Widths

The Larger of the Buffers for Habitat and Water Quality Applies											
BUFFER TO PROTECT HABITAT											
Rating for habitat from the wetland rating form under the Washington State Wetland Rating System for Western Washington, 2014.	3 L,L,L	3* L,L,L	4 M,L,L	5 M,M,L	5 H,L,L	6 M,M,M	6 H,M,L	7 H,M,M	7 H,H,L	8 H,H,M	9 H,H,H Wetland A
Buffer width for habitat for all wetlands except estuarine wetlands and coastal lagoons	100'	120'	140'	160'	180'	200'	220'	240'	260'	280'	300'
Buffer width with mitigation under24.30.050 TCC	100'	100'	105'	120'	135'	150'	165'	180'	195'	210'	225'

Fish and Wildlife Habitat Conservation Areas

Thurston County regulates Streams, Rivers and Lakes under 20 acres under TCC24.Streams are a Fish and Wildlife Habitat under Thurston County Code and even though this portion of the creek has a artificial channel U shaped channel, it is primarily draining wetlands and will be regulated with regards to development activities like a natural stream.

Fish and wildlife habitat conservation areas that must be considered for classification and designation include:

A. Areas where endangered, threatened, and sensitive species have a primary association;

B. Habitats and species of local importance, as determined locally;

C. Commercial and recreational shellfish areas;

D. Kelp and eelgrass beds; herring, smelt, and other forage fish spawning areas;

E. Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat;

F. Waters of the state;

G. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;

H. State natural area preserves, natural resource conservation areas, and state wildlife areas; and

1. Any other habitat areas as defined by WAC 365-190-130, as amended.

"Streams" means those areas of Thurston County where surface waters flow sufficiently to produce a defined channel or bed. A "defined channel or bed" is an area which demonstrates clear evidence of the passage of water and includes but is not limited to bedrock channels, gravel beds, sand and silt beds and defined-channel swales. The channel or bed need not contain water year-round. This definition is not meant to include irrigation ditches, canals, storm or surface water runoff devices or other entirely artificial watercourses unless they are used by salmon or used to convey streams naturally occurring prior to construction.

- "Stream and water body types" means as follows:
    1. Type S waters include all aquatic areas inventoried as "shorelines of the state," in accordance with Chapter 90.58 RCW, including segments of streams where the mean annual flow is more than twenty cubic feet per second, marine shorelines and lakes twenty acres in size or greater.
    2. Type F waters include all segments of aquatic areas that are not type S waters and that contain fish or fish habitat including waters diverted for use by a federal, state or tribal fish hatchery from the point of diversion for one thousand five-hundred feet or the entire tributary if the tributary is highly significant for protection of downstream water quality.

3. Type N waters include all segments of aquatic areas that are not type S or F waters and that are physically connected by an above-ground channel system, stream or wetland to type S or F waters.

24.25.020 - Standard freshwater riparian habitat area width.

Table 24.25-1 identifies the standard riparian habitat area widths.

A. Measurement. Riparian habitat area widths are measured on a horizontal plane, outward from the ordinary high water mark (OHWM) on each side of the stream (see Figure 24.25-1).

Figure 24.25-1

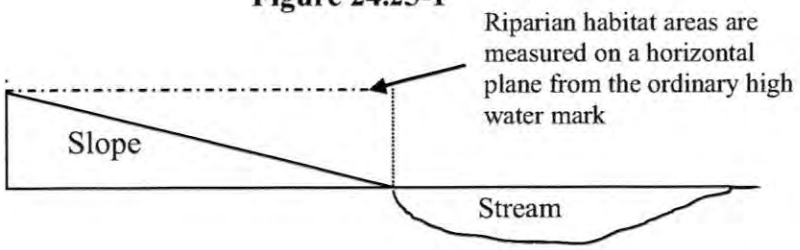


Table 24.25-1. Standard Freshwater Riparian Habitat Area Widths

Expand

STREAM TYPE	STANDAR WIDTH
Type S streams	250'
Type F streams greater than 20 feet in width (for all stream types, width is defined as bankfull width)	250'
Type F streams from 5—20 feet wide	200'
Type F streams less than 5 feet wide	150'
Type Np and Ns streams draining to Type S or F streams or directly to Puget Sound	150'
Type Np and Ns streams with high mass wasting potential	225'
Other streams not listed above, including streams without a surface connection to other waters	

Therefore, the stream/ditch would be a Type F between 5-20 feet wide, and carries a 200-foot buffer according to the Table above. This buffer would be superseded by the larger wetland buffer that is associated with the same areas. The stream is wide, but it is still intermittent with regard to flow and dries in the summer

Table 2 - Summary of Wetlands and Streams on or in the Vicinity of the Subject Property

Wetland	Size		Rating		STD Buffer Width (feet)	Buffer Area (acres)	Cowardin Class	Comments
	On-site	Off-site (estimated)	Category	Habitat Points				
Wetland A	40.98 acres	15.83 acres	II	(HHH)	300	25.27	PFOC, PSSC, PEMC	No impacts
Yelm Creek	1371 feet	4 miles	F<20ft	NA	200	In Wetland Buffer		No Impacts

In 1.

TCC 24.01.035 - General requirements. States:

1. G. Construction Setbacks. Construction activity must occur outside of the critical area and associated buffer unless specifically authorized pursuant to this title. Structures or uses requiring a permit shall be set back a minimum of fifteen feet from wetland buffers, riparian habitat areas, marine buffers, important habitat buffers, priority species conservation areas, and landslide hazards area buffers unless the applicant demonstrates to the approval authority's satisfaction that the proposed construction activity will not encroach into the protected area. Structures and uses not requiring a building permit are required to observe the setbacks and other requirements of this title.

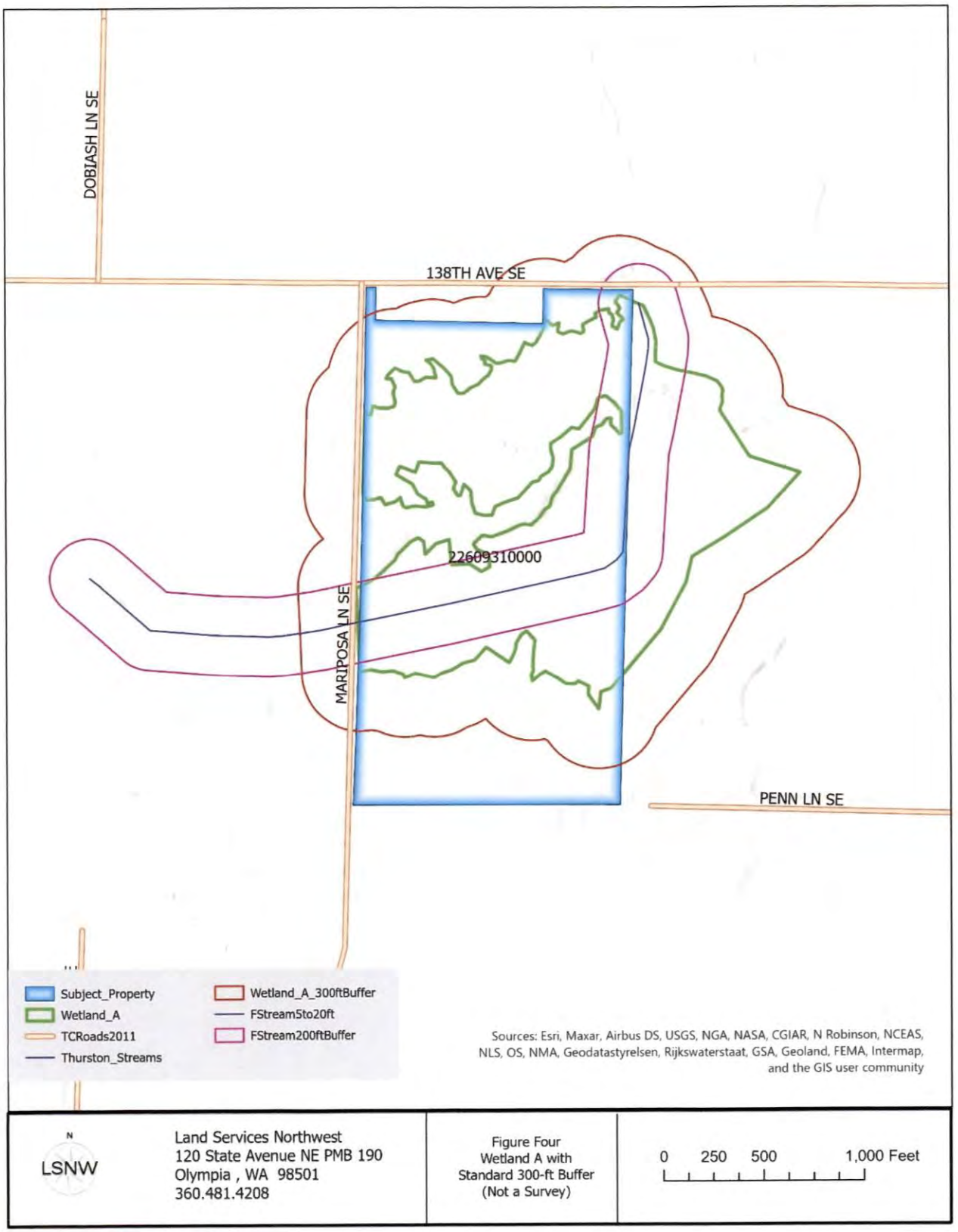


Figure 4 – Standard Buffers

6.2 Corps Regulations

Wetland A flows to the Puget Sound via Yelm Creek and is considered Waters of the US. No impacts are planned for this wetland, and this is a conservation planning document.

6.3 Department of Ecology

Under RCW 90.48, the Washington Department of Ecology (DOE) reserves regulatory authority to regulate "waters of the state" under Section 401 of the Clean Water Act. No wetland impacts are proposed.

7.0 WILDLIFE

Observed	Federally listed/PHS	Wildlife observed during site visit
Mourning doves	None	Observed in tees
Coyote	None	Scat found on trails
American beaver	None	Cut trees found
Rocky mountain elk	None	Dropping found on site browse
American crow	None	In trees
Dark eyed junco	None	In brush
Bushtit	None	In brush
Fox sparrow	None	In brush
Red naped sapsucker	None	Holes in bark found

Wildlife found onsite are typical of Wetland and upland adapted species. The European starling, racoons, possum, Rochy Mountain elk, Columbian deer, red naped sapsucker, American beaver, Viginia rail, American Woodcock, Ruffed grouse, Mourning doves, California quail and other species a may inhabit or visit the site for food and shelter.

No other Federally listed, or priority species was observed on the subject property or near the site based on the WDFW Priority Habitats and Species (PHS) and field observations during the reconnaissance and delineation. During the limited duration of the site reconnaissance and delineation, no evidence of the Federally listed Bald Eagle, Marbled Murrelet, or Spotted Owl was observed on-site.

No Federally listed salmonid species are known to occur on-site, based on the WDFW SalmonScape database, the WDFW PHS database, and site reconnaissance.

8.0 PROPOSED PROJECT

8.1 Description

There is no project at this time. The applicant is providing this document to confirm wetland extent, buffer extent, and eventually develop a habitat management / conservation plan for the property and protection of the natural resources (**See Figure 5 – Site Plan**).

8.2 Development Impacts

There is no project and therefore no impacts proposed. The applicant will be managing the property to maximize the benefit as a habitat and natural resources, and this will be part of the baseline information of that plan.

8.3 Impact Avoidance and Minimization

Once buffers are established the applicants will begin the planning to improve the ecological functions of the area.

8.4 Minimization of Water Quality Impacts

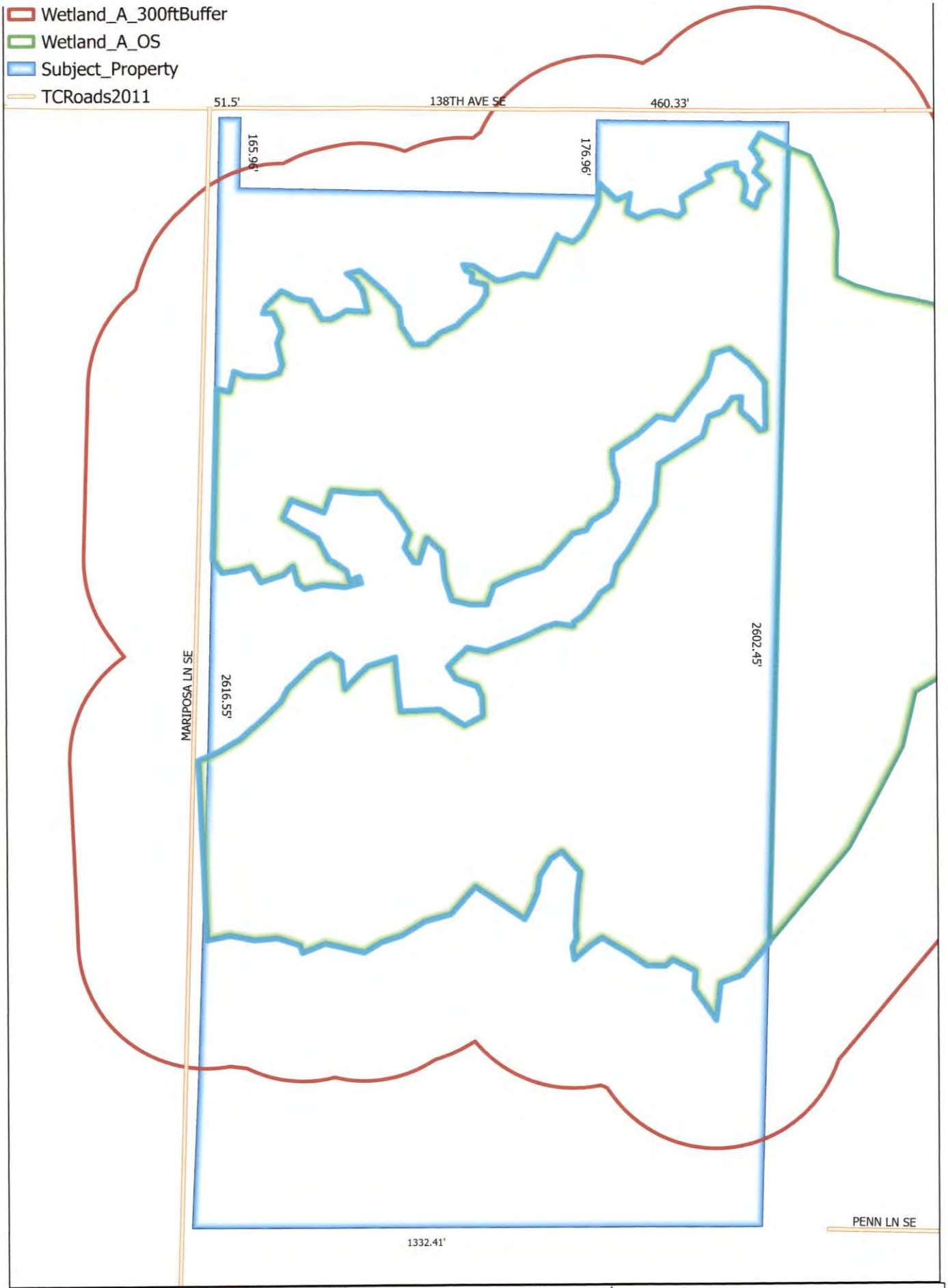
No project is proposed, no impacts to water quality will occur.

9.0 SUMMARY AND CONCLUSIONS

One wetland, Wetland A, was discovered on and offsite during the survey. Wetland A was rated as a Category II wetland with an overall score of 22 and a habitat score of nine. Wetlands in Thurston County with a habitat score of nine require a 300 ft buffer with a fifteen-foot building setback. An onsite drainage was determined to be a Type F stream between 5-20 feet and will carry 200-ft buffer. This study will establish buffers so that the applicant can better maintain the property and natural resources to the benefit of the citizens of Thurston County

10.0 LIMITATIONS

This report was created with care and best professional judgment using the current best available science. but the report is subject to interpretation by local state and federal regulators who have the final regulatory authority on wetlands, buffer widths and other critical area determinations. No outcomes are warranted by this report.



Land Services NW
120 State Avenue NE
Olympia, WA 98501
360-481-4208

N
LSNW

Figure 5
Wetland With Standard Buffer
(Not a Survey)

0 95 190 380 US Feet

1 inch equals 200 Feet

11.0 REFERENCE

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Appendix A – Photographs


I SNW
Project: Gorgas
Tp6
46.88412, -122.56565
Parcel #2260931000

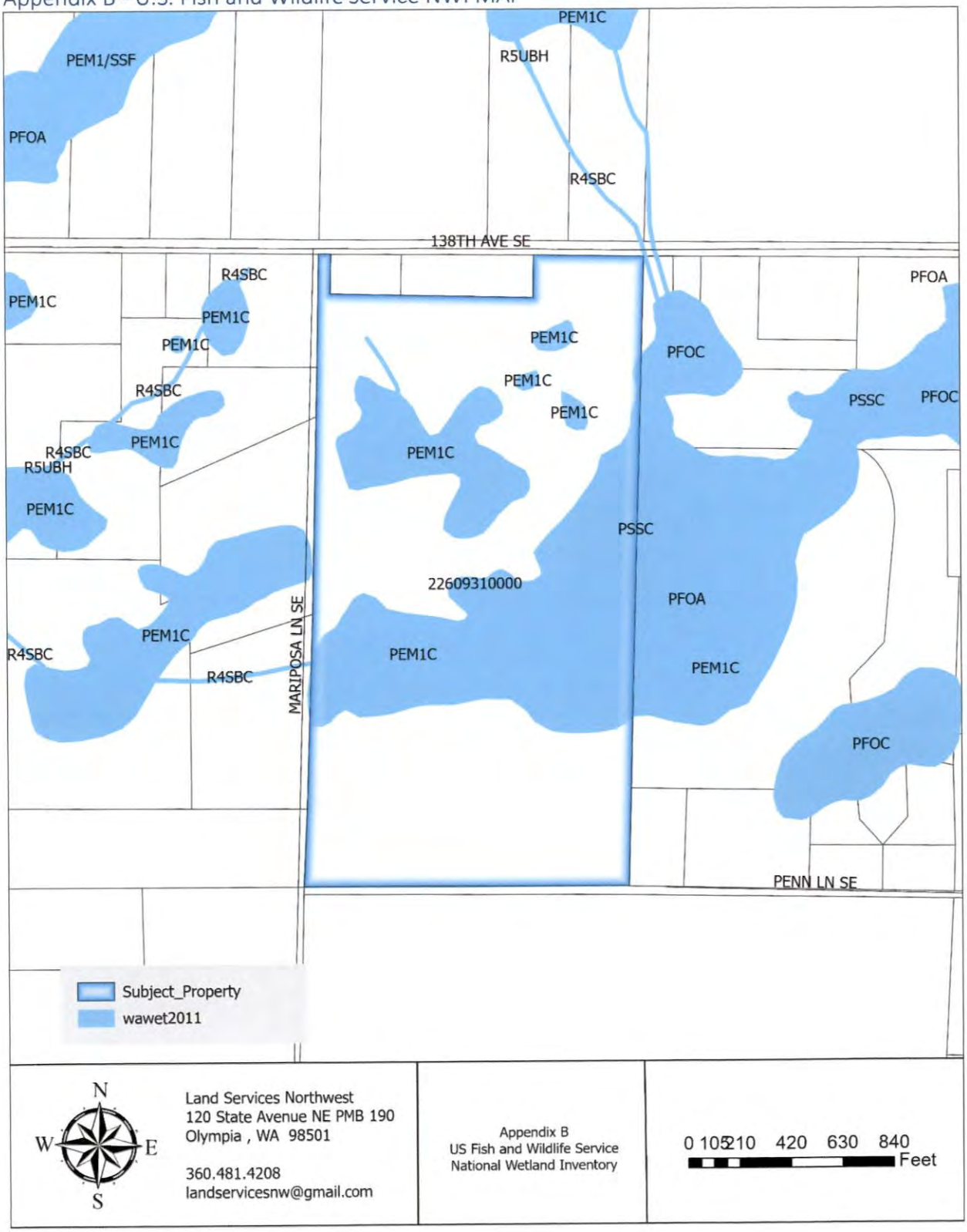

I SNW
Project: Gorgas
Tp5
46.88663, -122.56333
Parcel #2260931000


LSNW
Project: Gorgas
Tp2
46.88665, -122.56163


Gorgas
Snag
02.15.2025 11:23 AM
46.88654, -122.56187

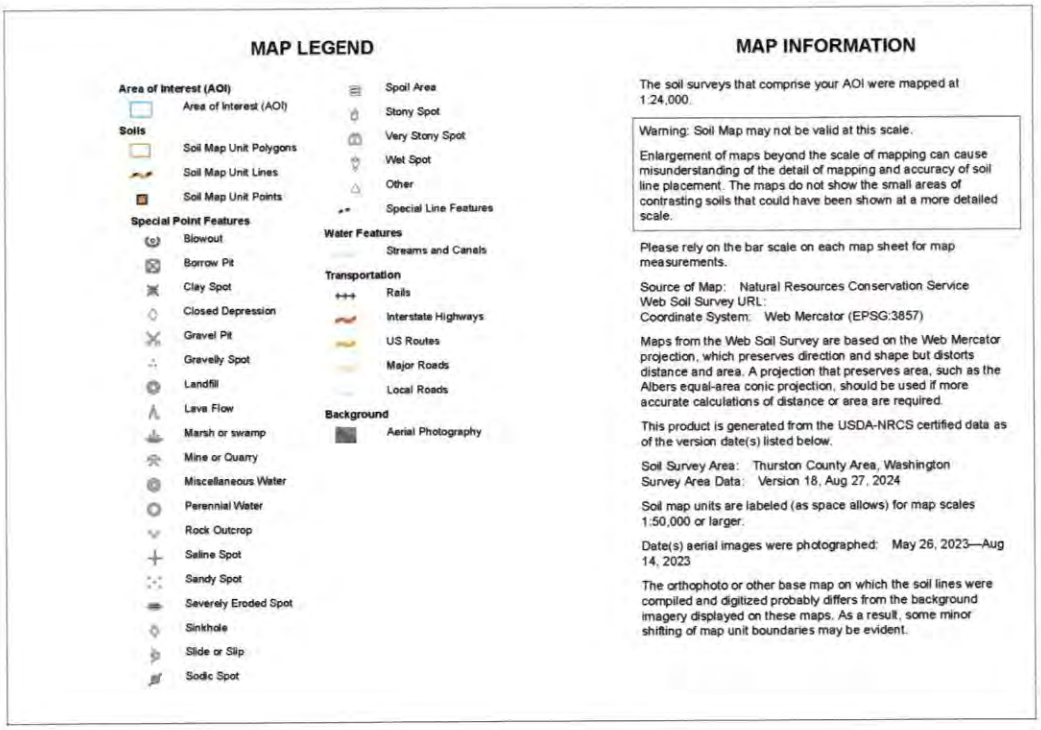

LSNW
Project Gorgas
46.88665, -122.56161
Parcel #2260931000

Appendix B - U.S. Fish and Wildlife Service NWI MAP



Appendix C - Thurston County NRCS Soil Survey Map

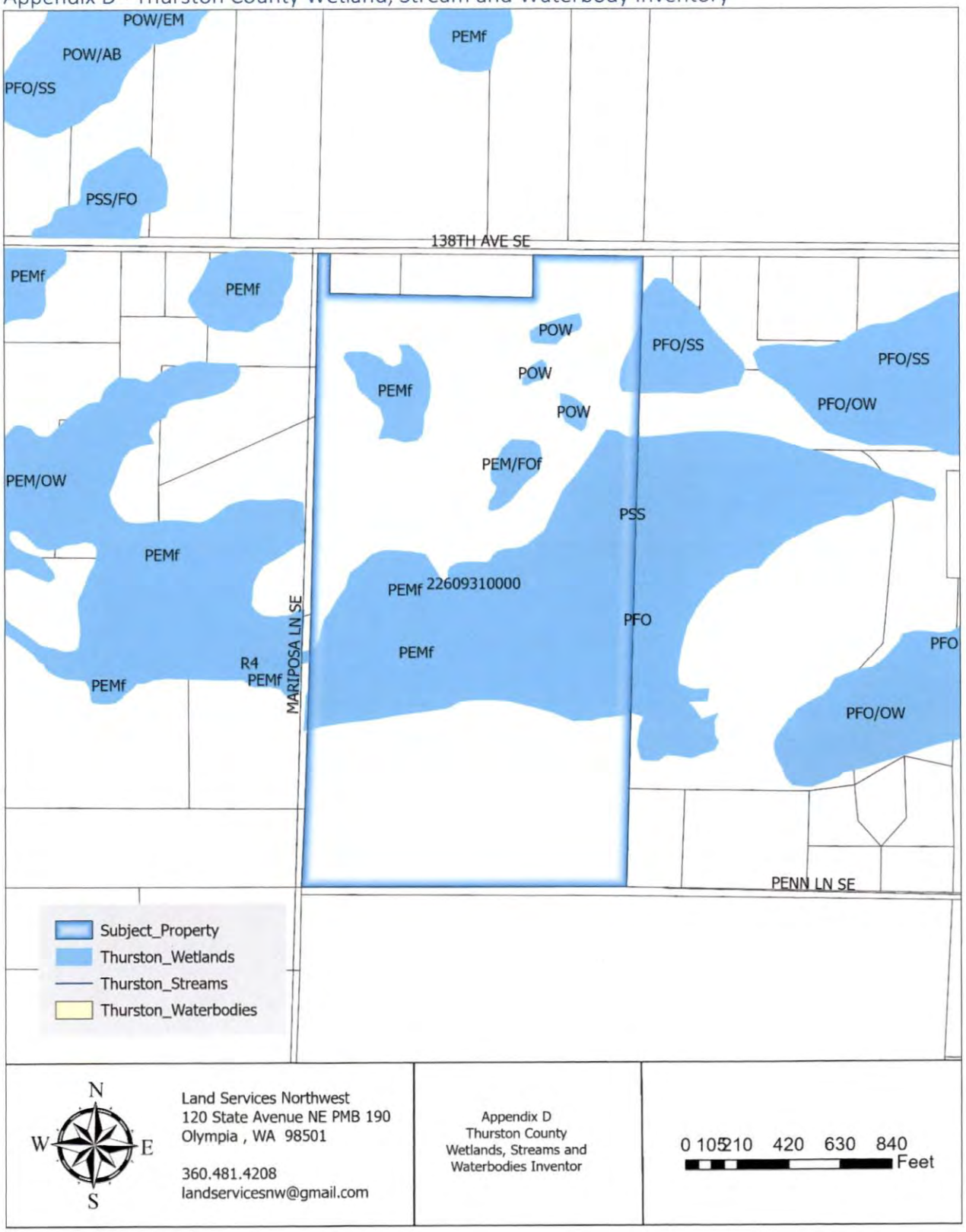
Soil Map—Thurston County Area, Washington



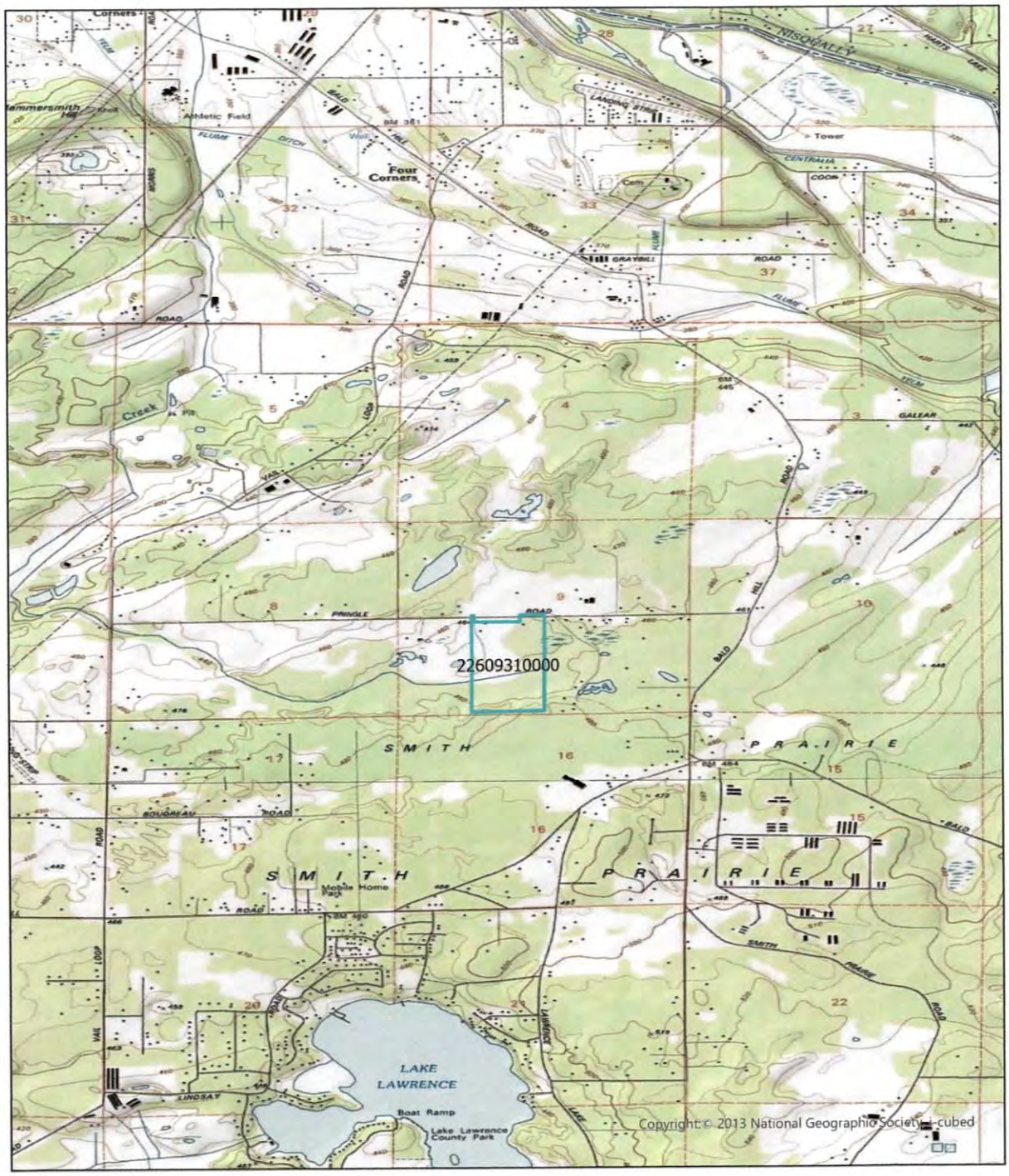
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
33	Everett very gravelly sandy loam, 8 to 15 percent slopes	1.0	0.9%
50	Kapowsin silt loam, 0 to 3 percent slopes	48.2	43.1%
70	Mukilteo muck, drained	0.8	0.7%
75	Norma fine sandy loam	44.9	40.2%
105	Shalcar muck	17.0	15.2%
Totals for Area of Interest		**111.9**	**100.0%**

Appendix D - Thurston County Wetland, Stream and Waterbody Inventory



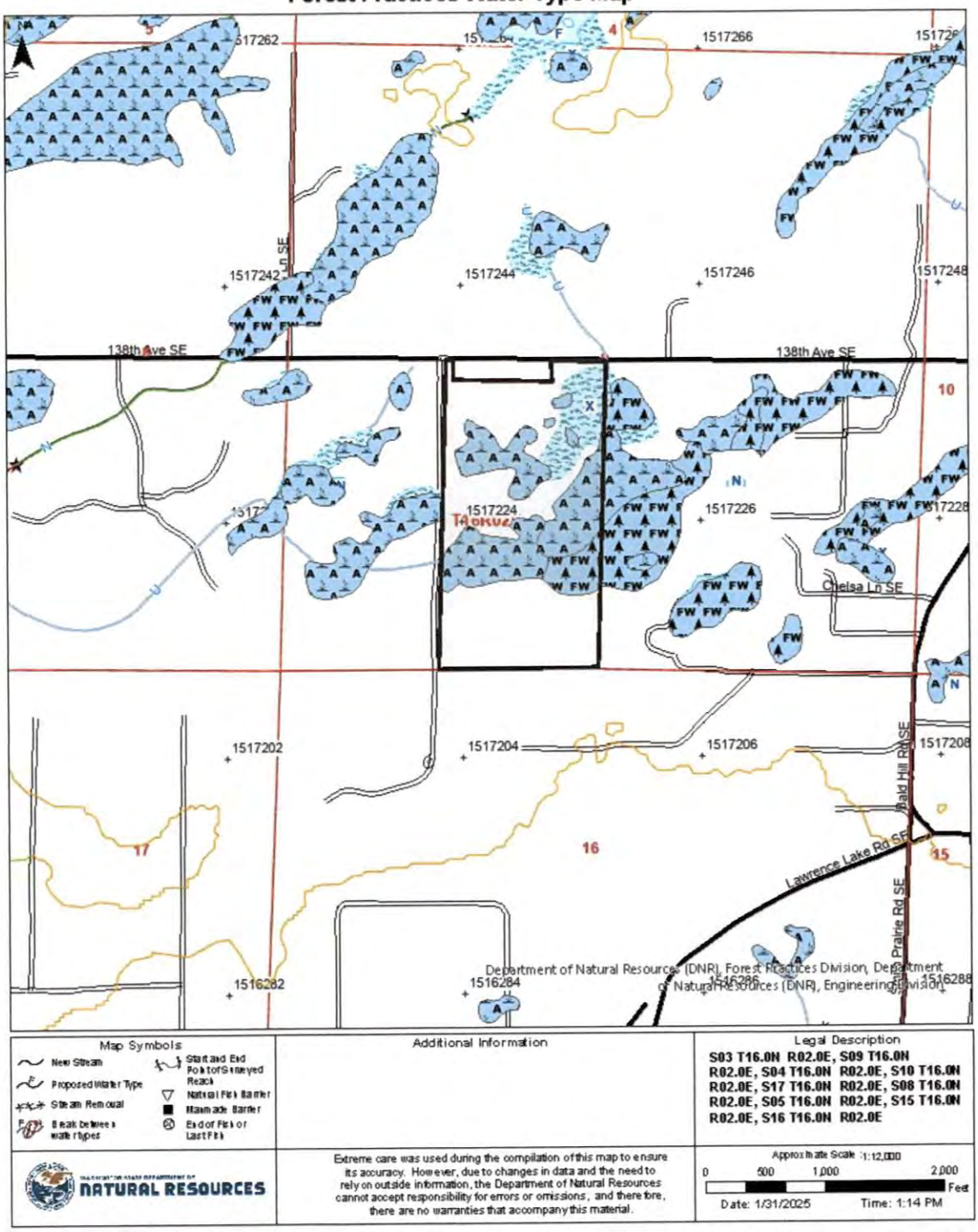
Appendix E - USGS 7.5 Minute Topographic Map



Land Services NW 120 State Avenue NE Olympia, WA 98501 360-481-4208	N	Appendix E Topographical Map Parcel #22609310000	0 500,000 2,000 US Feet

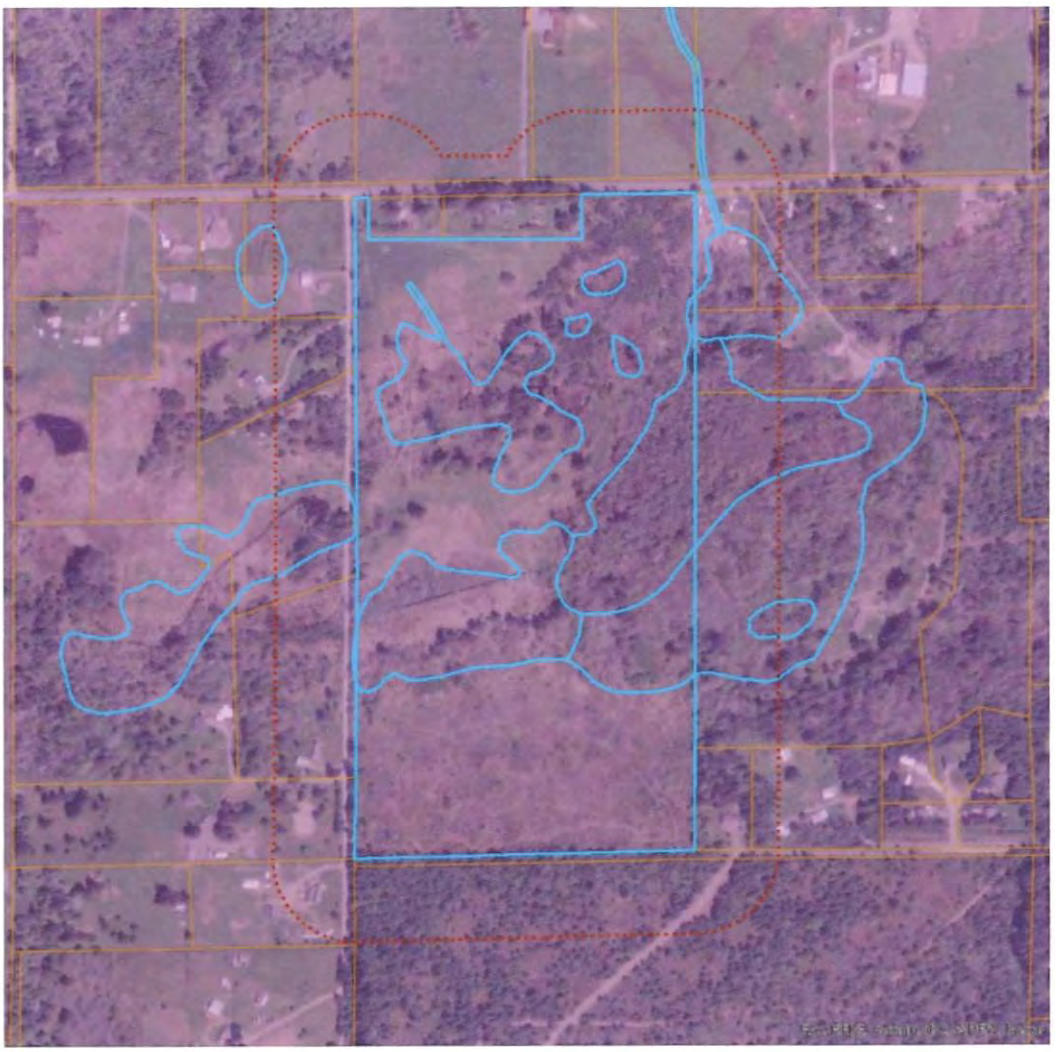
Appendix F - WDNR Forest Practices Activity Map

Forest Practices Water Type Map



Appendix G - WDFW Priority Habitats and Species and Salmonscape

Priority Habitats and Species on the Web



Buffer radius: 330 Feet

Report Date: 01/31/2025, Parcel ID: 22609310000

PHS Species/Habitats Overview:

Occurence Name	Federal Status	State Status	Sensitive Location
Waterfowl Concentrations	N/A	N/A	No
Freshwater Emergent Wetland	N/A	N/A	No
Freshwater Forested/Shrub Wetland	N/A	N/A	No

PHS Species/Habitats Details:

Waterfowl Concentrations	
Priority Area	Breeding Area
Site Name	RAINIER PRARIES
Accuracy	1/4 mile (Quarter Section)
Notes	WATERFOWL BREEDING AREAS W/WINTERING USE
Source Record	900957
Source Dataset	PHSREGION
Source Name	SCHIRATO, GREG
Source Entity	WA Dept. of Fish and Wildlife
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS LISTED OCCURRENCE
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=00026
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

Freshwater Forested/Shrub Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Forested/Shrub Wetland - NWI Code: PFOC
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

Freshwater Forested/Shrub Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Forested/Shrub Wetland - NWI Code: PSSC
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

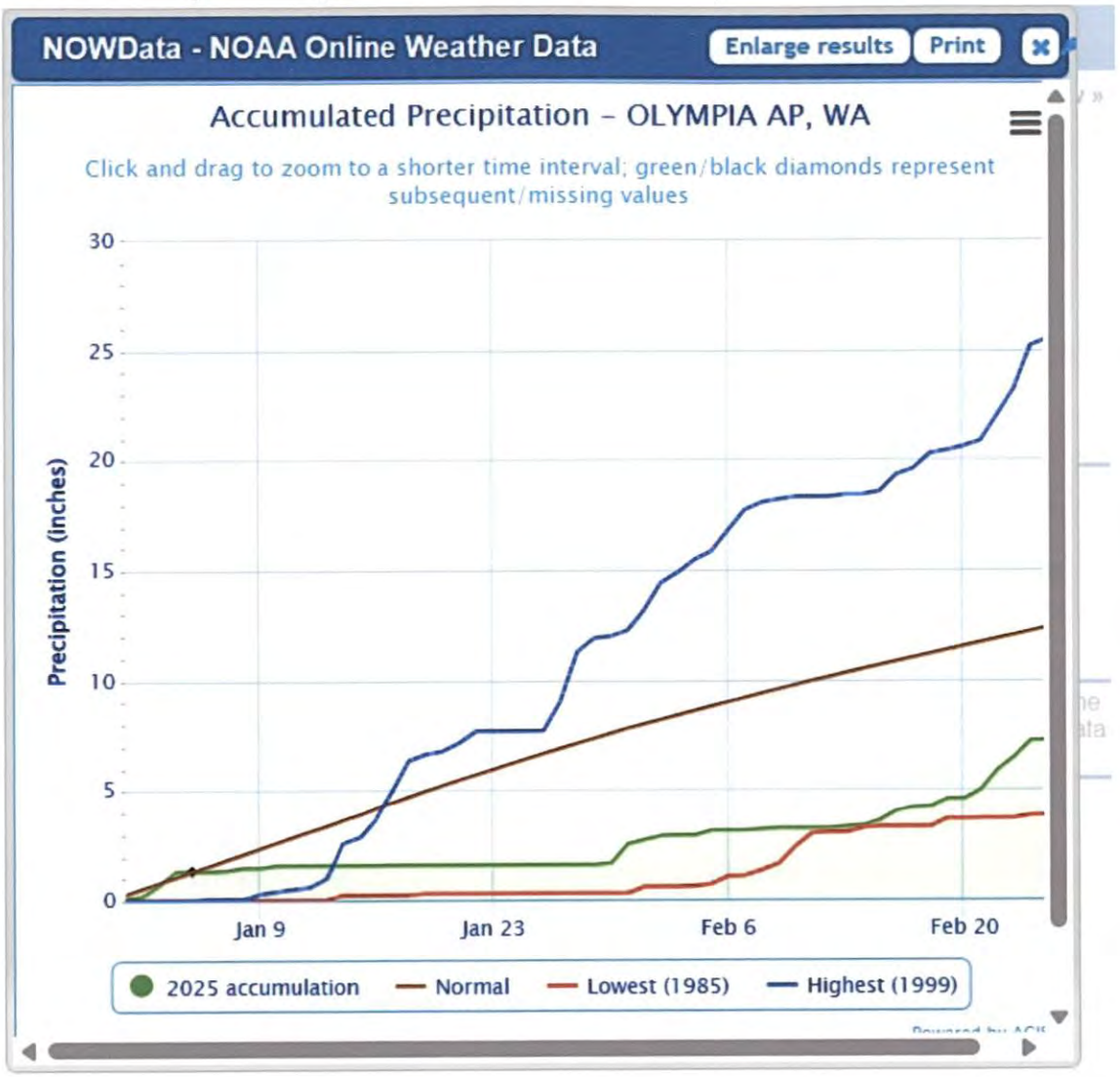
Freshwater Forested/Shrub Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Forested/Shrub Wetland - NWI Code: PFOA
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.


WASHINGTON DEPARTMENT OF FISH & WILDLIFE
SalmonScape
Map Controls
Fish Distribution
Hydrography
SMITH PRAIRIE
N
0 0.1 0.2mi
Bureau of Land Management, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/N

Appendix H - NOAA Now Precipitation Data

If you have questions or need to contact us, please see our FAQ



Appendix I - COE Wetland Data Sheets

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

Project/Site: Gorgas City/County: Thurston Sampling Date: 2.15.25
Applicant/Owner: Roland and Cindy Gorgas State: WA Sampling Point: TP1
Investigator(s): Alex Callender Section, Township, Range: 09, 16, 2e
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): 2 Lat: 46.883830 Long: -122.567269 Datum: Wgs84
Soil Map Unit Name: Norma NWI classification: PEM!C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes x 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	x	No	
Hydric Soil Present?	Yes	x	No	
Wetland Hydrology Present?	Yes	x	No	

Is the Sampled Area within a Wetland? Yes x No ___

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Malus fusca*	10	Y	FACW
2.			
3.			
4.			
	10	= Total Cover	

Sapling/Shrub Stratum (Plot size: ___)			
1. *Rosa pisocarpa*	10	Y	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	

Herb Stratum (Plot size: ___)			
1. *Phalaris arundinacea*	75	Y	FACW
2. *Carex obnupta*	15	N	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	___	= Total Cover	

Woody Vine Stratum (Plot size: ___)		
1.		
2.		
	90	= Total Cover

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	___	x 1 =	___
FACW species	___	x 2 =	___
FAC species	___	x 3 =	___
FACU species	___	x 4 =	___
UPL species	___	x 5 =	___
Column Totals:	___ (A)		___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
x 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes x No ___

Remarks: Greater than 50% of dominant vegetation is FAC or wetter.

SOIL

Sampling Point: TP1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10YR3/1	100						Silt loam
6-12	10YR5/2	100						Silt loam
12-18	10YR5/1	90	10YR5/8	10				Sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** ___

Remarks: Depleted matrix present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- x 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 Stressed 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 x No ___ Depth (inches): _____

Water Table Present? Yes ___ No x Depth (inches): _____

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

Wetland Hydrology Present? **Yes** x **No** ___

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

Remarks: Surface water present.

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

Project/Site: Gorgas City/County: Thurston Sampling Date: 2.15.25
Applicant/Owner: Roland and Cindy Gorgas State: WA Sampling Point: TP2
Investigator(s): Alex Callender Section, Township, Range: 09, 16, 2e
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): 2 Lat: 46.883830 Long: -122.567269 Datum: Wgs84
Soil Map Unit Name: Norma NWI classification: PEMIC
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x No ___	**Is the Sampled Area within a Wetland?** **Yes x No ___**
Hydric Soil Present?	Yes x No ___	
Wetland Hydrology Present?	Yes x No ___	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus contorta*	95	Y	FAC
2. *Populus balsamifera*	3	N	FAC
3.			
4.			
	98	= Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1. *Spiraea douglasii*	30	Y	FACW
2.			
3.			
4.			
5.			
	30	= Total Cover	
Herb Stratum (Plot size: ___)			
1. *Carex obnupta*	70	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70	= Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	___	x 1 =	___
FACW species	___	x 2 =	___
FAC species	___	x 3 =	___
FACU species	___	x 4 =	___
UPL species	___	x 5 =	___
Column Totals:	___ (A)		___ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
x 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x No ___**

Remarks: Greater than 50% of dominant vegetation is FAC or wetter.

SOIL

Sampling Point: TP2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR3/1	100					Silt loam	
4-18	10YR4/2	90	10YR4/6	10			Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** ____

Remarks: Depleted matrix present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- x 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 Stressed 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 x Depth (inches): ____

Water Table Present? Yes x No ___ Depth (inches): 4"

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): ____

Wetland Hydrology Present? **Yes** x **No** ____

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

Remarks: Hydro at 4".

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

Project/Site: Gorgas City/County: Thurston Sampling Date: 2.15.25
Applicant/Owner: Roland and Cindy Gorgas State: WA Sampling Point: TP3
Investigator(s): Alex Callender Section, Township, Range: 09, 16, 2e
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): 2 Lat: 46.883830 Long: -122.567269 Datum: Wgs84
Soil Map Unit Name: Norma NWI classification: PEM!C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x	No ___	**Is the Sampled Area within a Wetland?** Yes ___ No x
Hydric Soil Present?	Yes ___	No x	
Wetland Hydrology Present?	Yes ___	No x	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus contorta*	95	Y	FAC
2.			
3.			
4.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1. *Spiraea douglasii*	2	Y	FACW
2.			
3.			
4.			
5.			
	2	= Total Cover	
Herb Stratum (Plot size: ___)			
1. *Pteridium aquilinum*	20	Y	FACU
2. *Carex obnupta*	20	Y	OBL
3. *Gaultheria shallon*	20	Y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	___	x 1 =	___
FACW species	___	x 2 =	___
FAC species	___	x 3 =	___
FACU species	___	x 4 =	___
UPL species	___	x 5 =	___
Column Totals:	___ (A)		___ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
x 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes x No ___

Remarks: Greater than 50% of dominant vegetation is FAC or wetter.

SOIL

Sampling Point: TP3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10YR4/2	100					Silt loam	
2-18	10YR5/2	90	10YR5/6				Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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 Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** x

Remarks: No hydric soil indicators present.

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 Stressed 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 x Depth (inches): _____

Water Table Present? Yes ___ No x Depth (inches): _____

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

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks: No wetland hydrology indicators present.

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

Project/Site: Gorgas City/County: Thurston Sampling Date: 2.15.25
Applicant/Owner: Roland and Cindy Gorgas State: WA Sampling Point: TP4
Investigator(s): Alex Callender Section, Township, Range: 09, 16, 2e
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): 2 Lat: 46.883830 Long: -122.567269 Datum: Wgs84
Soil Map Unit Name: Norma NWI classification: PEM!C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes x 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	x	No	
Hydric Soil Present?	Yes		No	
Wetland Hydrology Present?	Yes		No	

Is the Sampled Area within a Wetland? **Yes** _____ **No** _____

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Crataegus douglasii*	2	Y	FAC
2.			
3.			
4.			
	2	= Total Cover	

Sapling/Shrub Stratum (Plot size: _____)			
1. *Fraxinus latifolia*	5	Y	FACW
2. *Lonicera involucrata*	5	Y	FAC
3.			
4.			
5.			
	10	= Total Cover	

Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
		= Total Cover	

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
x 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No** _____

Remarks: Greater than 50% of dominant vegetation is FAC or wetter.

SOIL

Sampling Point: TP4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR3/1	100					Silt loam	
10-18	10YR5/2	80	10YR5/6	20			Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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)
- x Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** ____

Remarks: Depleted matrix present.

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 Stressed 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 x Depth (inches): _____

Water Table Present? Yes x No ___ Depth (inches): 4"

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

Wetland Hydrology Present? **Yes** x **No** ____

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

Remarks: Hydro at 4".

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

Project/Site: Gorgas City/County: Thurston Sampling Date: 2.15.25
Applicant/Owner: Roland and Cindy Gorgas State: WA Sampling Point: TP5
Investigator(s): Alex Callender Section, Township, Range: 09, 16, 2e
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): 2 Lat: 46.883830 Long: -122.567269 Datum: Wgs84
Soil Map Unit Name: Norma NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ___	No x	**Is the Sampled Area within a Wetland?**	**Yes ___ No x**
Hydric Soil Present?	Yes ___	No x		
Wetland Hydrology Present?	Yes ___	No x		

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	___ = Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	___ = Total Cover		
Herb Stratum (Plot size: ___)			
1. *Anthoxanthum odoratum*	20	Y	FACU
2. *Dactylis glomerata*	20	Y	FACU
3. *Agrostis capillaris*	60	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	___ = Total Cover		

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	___	x 1 =	___
FACW species	___	x 2 =	___
FAC species	___	x 3 =	___
FACU species	___	x 4 =	___
UPL species	___	x 5 =	___
Column Totals:	___ (A)		___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ___ No x**

Remarks: Less than 50% of dominant vegetation is FAC or wetter.

SOIL

Sampling Point: TP5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10YR3/2	100					Silt loam	
4-18	10YR4/3	100					Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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 Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks: No hydric soil indicators present.

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 Stressed 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 x Depth (inches): _____

Water Table Present? Yes ___ No x Depth (inches): _____

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

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks: No wetland hydrology indicators present.

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

Project/Site: Gorgas City/County: Thurston Sampling Date: 2.15.25
Applicant/Owner: Roland and Cindy Gorgas State: WA Sampling Point: TP6
Investigator(s): Alex Callender Section, Township, Range: 09, 16, 2e
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): 2 Lat: 46.883830 Long: -122.567269 Datum: Wgs84
Soil Map Unit Name: Norma NWI classification: PEM!C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x	No ___	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** x
Hydric Soil Present?	Yes ___	No x	
Wetland Hydrology Present?	Yes ___	No x	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus latifolia*	25	Y	FACW
2.			
3.			
4.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1. *Rosa pisocarpa*	25	Y	FAC
2.			
3.			
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: ___)			
1. *Carex obnupta*	35	Y	OBL
2. *Agrostis capillaris*	60	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	___	x 1 =	___
FACW species	___	x 2 =	___
FAC species	___	x 3 =	___
FACU species	___	x 4 =	___
UPL species	___	x 5 =	___
Column Totals:	___ (A)		___ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
x 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No** ___

Remarks: Greater than 50% of dominant vegetation is FAC or wetter.

SOIL

Sampling Point: TP6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR3/2	100					Silt loam	
4-16	10YR5/4	100					Silt loam	
16-18	10YR5/2	80	10YR5/6	20			Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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 Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks: No hydric soil indicators present.

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 Stressed 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 x Depth (inches): _____

Water Table Present? Yes ___ No x Depth (inches): _____

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

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks: No wetland hydrology indicators present.

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

Project/Site: Gorgas City/County: Thurston Sampling Date: 2.15.25
Applicant/Owner: Roland and Cindy Gorgas State: WA Sampling Point: TP7
Investigator(s): Alex Callender Section, Township, Range: 09, 16, 2e
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): 2 Lat: 46.883830 Long: -122.567269 Datum: Wgs84
Soil Map Unit Name: Norma NWI classification: PEM!C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes x 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 x No ___	**Is the Sampled Area within a Wetland?** **Yes x No ___**
Hydric Soil Present?	Yes x No ___	
Wetland Hydrology Present?	Yes x No ___	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Malus fusca*	35	Y	FACW
2.			
3.			
4.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1. *Rosa pisocarpa*	10	Y	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: ___)			
1. *Phalaris arundinacea*	90	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	___	x 1 =	___
FACW species	___	x 2 =	___
FAC species	___	x 3 =	___
FACU species	___	x 4 =	___
UPL species	___	x 5 =	___
Column Totals:	___ (A)		___ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x No ___**

Remarks: Greater Less than 50% of dominant vegetation is FAC or wetter.

SOIL

Sampling Point: TP7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10YR3/1	100					Silt loam	
4-18	10YR5/2	90	10YR5/8	10			Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** ___

Remarks: Depleted matrix present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- x 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 Stressed 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 x Depth (inches): _____

Water Table Present? Yes x No ___ Depth (inches): 6"

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

Wetland Hydrology Present? **Yes** x **No** ___

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

Remarks: Hydro at 6".

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

Project/Site: Gorgas City/County: Thurston Sampling Date: 2.28.25
Applicant/Owner: Roland and Cindy Gorgas State: WA Sampling Point: TPB1
Investigator(s): Alex Callender Section, Township, Range: 09, 16, 2e
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): 2 Lat: 46.883830 Long: -122.567269 Datum: Wgs84
Soil Map Unit Name: Norma NWI classification: PEM!C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes x 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	x	No	
Hydric Soil Present?	Yes	x	No	
Wetland Hydrology Present?	Yes	x	No	

Is the Sampled Area within a Wetland? Yes x No ___

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus contorta*	35	Y	FAC
2. *Malus fusca*	15	Y	FACW
3.			
4.			
	50	= Total Cover	

Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	___	= Total Cover	

Herb Stratum (Plot size: ___)			
1. *Carex obnupta*	75	Y	OBL
2. *Phalaris arundinacea*	25	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100	= Total Cover	

Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	___	= Total Cover	

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	___	x 1 =	___
FACW species	___	x 2 =	___
FAC species	___	x 3 =	___
FACU species	___	x 4 =	___
UPL species	___	x 5 =	___
Column Totals:	___ (A)		___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
x 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes x No ___

Remarks: Greater than 50% of dominant vegetation is FAC or wetter.

SOIL

Sampling Point: TPB1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10YR3/1	100					Sandy loam	
2-6	10YR4/2	90	10YR4/6	10			Sandy loam	
6-18	10YR5/1	90	10YR5/6	10			Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** ____

Remarks: Depleted matrix present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- x 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 Stressed 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 x Depth (inches): ____

Water Table Present? Yes x No ___ Depth (inches): 6"

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): ____

Wetland Hydrology Present? **Yes** x **No** ____

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

Remarks: Hydro at 6".

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

Project/Site: Gorgas City/County: Thurston Sampling Date: 2.28.25
Applicant/Owner: Roland and Cindy Gorgas State: WA Sampling Point: TPB2
Investigator(s): Alex Callender Section, Township, Range: 09, 16, 2e
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): 2 Lat: 46.883830 Long: -122.567269 Datum: Wgs84
Soil Map Unit Name: Norma NWI classification: PEM!C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ___	No x	**Is the Sampled Area within a Wetland?**	**Yes** ___	**No** x
Hydric Soil Present?	Yes ___	No x			
Wetland Hydrology Present?	Yes ___	No x			

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	___ = Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	___ = Total Cover		
Herb Stratum (Plot size: ___)			
1. *Cytisus scoparius*	1	N	UPL
2. *Schedonorus arundinaceus*	50	Y	FACU
3. *Agrostis capillaris*	50	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	101 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	___ = Total Cover		

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	___	x 1 =	___
FACW species	___	x 2 =	___
FAC species	50	x 3 =	150
FACU species	51	x 4 =	204
UPL species	___	x 5 =	___
Column Totals:	101 (A)		___ (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: Less than 50% of dominant vegetation is FAC or wetter.

SOIL

Sampling Point: TPB2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10YR3/3	100					Silt loam	
4-14	10YR4/4	100					Silt loam	
14-18	10YR5/3	100					Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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 Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks: No hydric soil indicators present.

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 Stressed 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 x Depth (inches): _____

Water Table Present? Yes ___ No x Depth (inches): _____

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

Wetland Hydrology Present? **Yes** ___ **No** x

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

Remarks: No wetland hydrology indicators present.

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

Project/Site: Gorgas City/County: Thurston Sampling Date: 2.28.25
Applicant/Owner: Roland and Cindy Gorgas State: WA Sampling Point: TPB3
Investigator(s): Alex Callender Section, Township, Range: 09, 16, 2e
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): 2 Lat: 46.883830 Long: -122.567269 Datum: Wgs84
Soil Map Unit Name: Norma NWI classification: PEM!C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes x 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	X	No	
Hydric Soil Present?	Yes	X	No	
Wetland Hydrology Present?	Yes	x	No	

Is the Sampled Area within a Wetland? **Yes** x **No** ___

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus latifolia*	35	Y	FACW
2.			
3.			
4.			
	35	= Total Cover	

Sapling/Shrub Stratum (Plot size: ___)			
1. *Rosa pisocarpa*	25	Y	FAC
2. *Symphoricarpos albus*	35	Y	FACU
3.			
4.			
5.			
	60	= Total Cover	

Herb Stratum (Plot size: ___)			
1. *Carex obnupta*	35	Y	OBL
2. *Phalaris arundinacea*	45	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80	= Total Cover	

Woody Vine Stratum (Plot size: ___)		
1.		
2.		
	___	= Total Cover

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	___	x 1 =	___
FACW species	___	x 2 =	___
FAC species	___	x 3 =	___
FACU species	___	x 4 =	___
UPL species	___	x 5 =	___
Column Totals:	___ (A)		___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
x 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No** ___

Remarks: Greater than 50% of dominant vegetation is FAC or wetter.

SOIL

Sampling Point: TPB3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR3/2	100					Silt loam	
4-18	10YR5/1	90	10YR5/6	10			Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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)
- x Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** ____

Remarks: Depleted matrix present.

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)
- x 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 Stressed 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 X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

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

Wetland Hydrology Present? **Yes** x **No** ____

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

Remarks: Wetted-stained leaves present.

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

Project/Site: Gorgas City/County: Thurston Sampling Date: 2.28.25
Applicant/Owner: Roland and Cindy Gorgas State: WA Sampling Point: TPB4
Investigator(s): Alex Callender Section, Township, Range: 09, 16, 2e
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): 2 Lat: 46.883830 Long: -122.567269 Datum: Wgs84
Soil Map Unit Name: Norma NWI classification: PEM!C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes x No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ___	No x	**Is the Sampled Area within a Wetland?**	**Yes** ___ **No** x
Hydric Soil Present?	Yes ___	No x		
Wetland Hydrology Present?	Yes ___	No x		

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus viridis*	5	N	FACW
2.			
3.			
4.			
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: ___)			
1. *Rubus armeniacus*	10	N	FAC
2. *Symphoricarpos albus*	20	Y	FACU
3.			
4.			
5.			
	30	= Total Cover	
Herb Stratum (Plot size: ___)			
1. *Phalaris arundinacea*	75	Y	FACW
2. *Pteridium aquilinum*	20	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	___	x 1 =	___
FACW species	___	x 2 =	___
FAC species	___	x 3 =	___
FACU species	___	x 4 =	___
UPL species	___	x 5 =	___
Column Totals:	___ (A)		___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: Greater than 50% of dominant vegetation is FAC or wetter.

SOIL

Sampling Point: TPB4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-14	10YR3/2	100					Silt loam	
14-18	10YR4/2	100					Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

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 Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** x

Remarks: No hydric soil indicators present.

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 Stressed 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 x Depth (inches): _____

Water Table Present? Yes ___ No x Depth (inches): _____

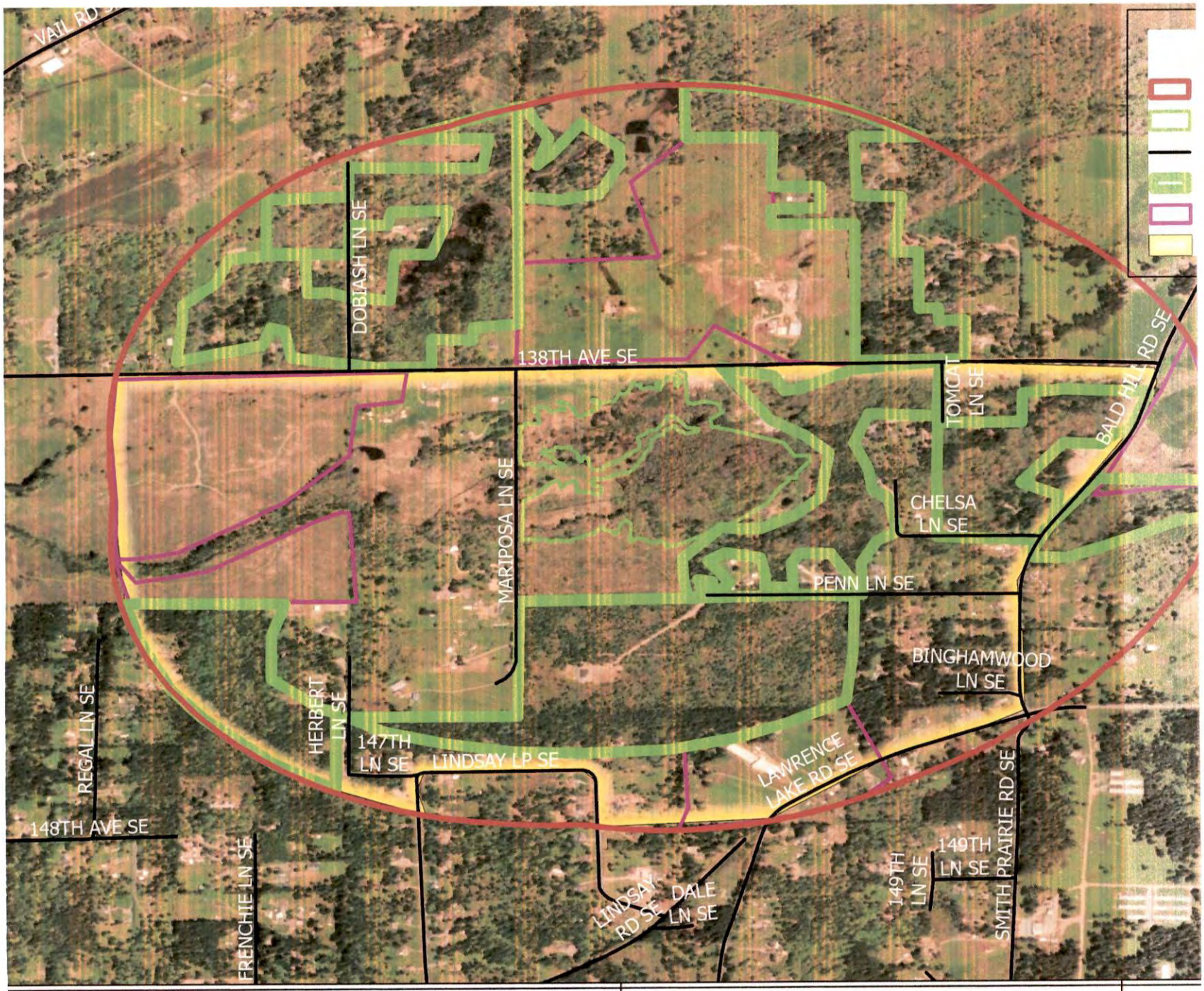
Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): _____

Wetland Hydrology Present? **Yes** ____ **No** x

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

Remarks: No wetland hydrology indicators present.

Appendix J - Wetland Rating Forms for Western Washington



N

LSNW

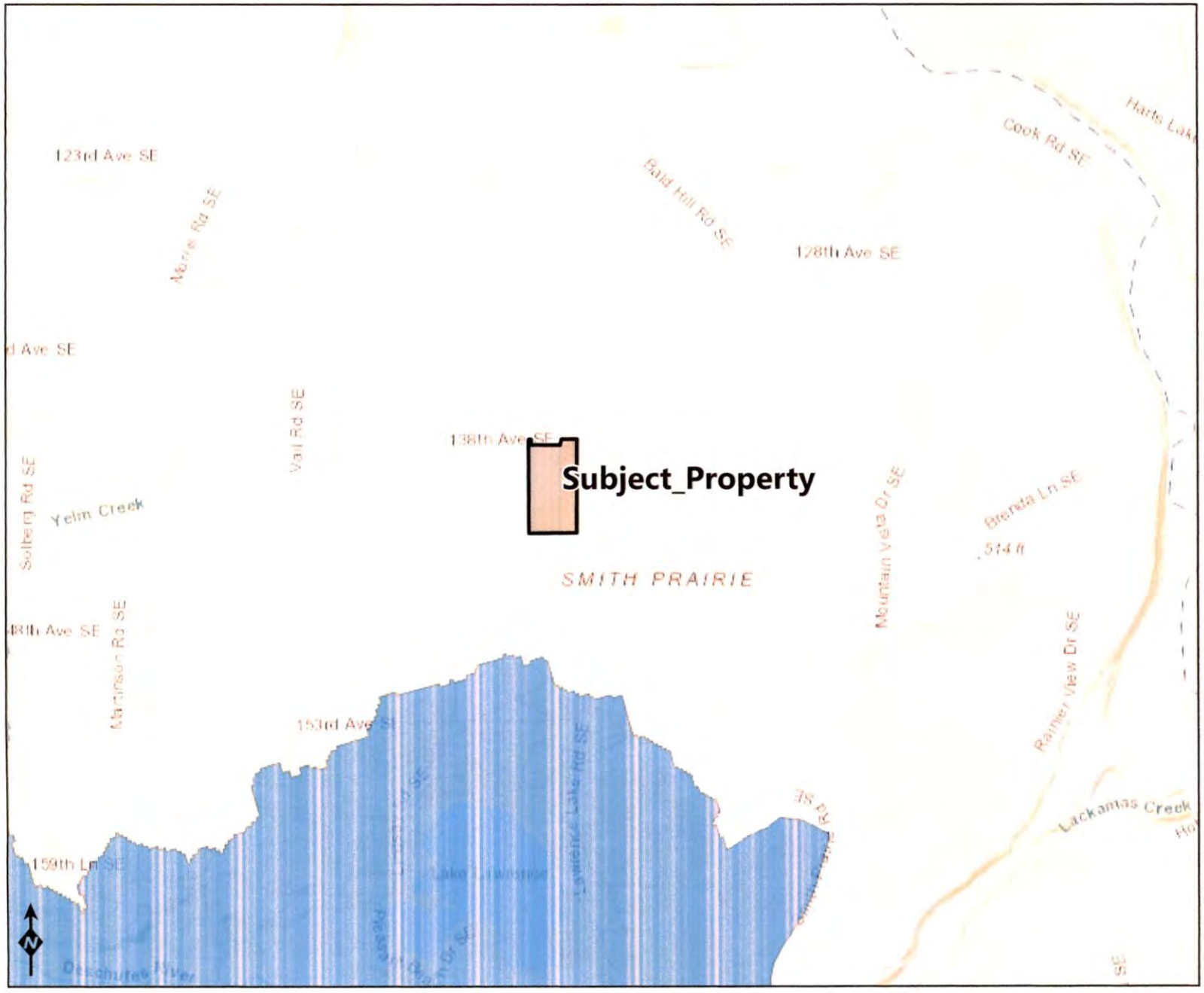
Land Services Northwest
120 State Avenue NE PMB 190
Olympia, WA 98501

Cowardin Classification Map

0 0.

March 17, 2025

No TMDL In Basin



WQ Improvement Projects

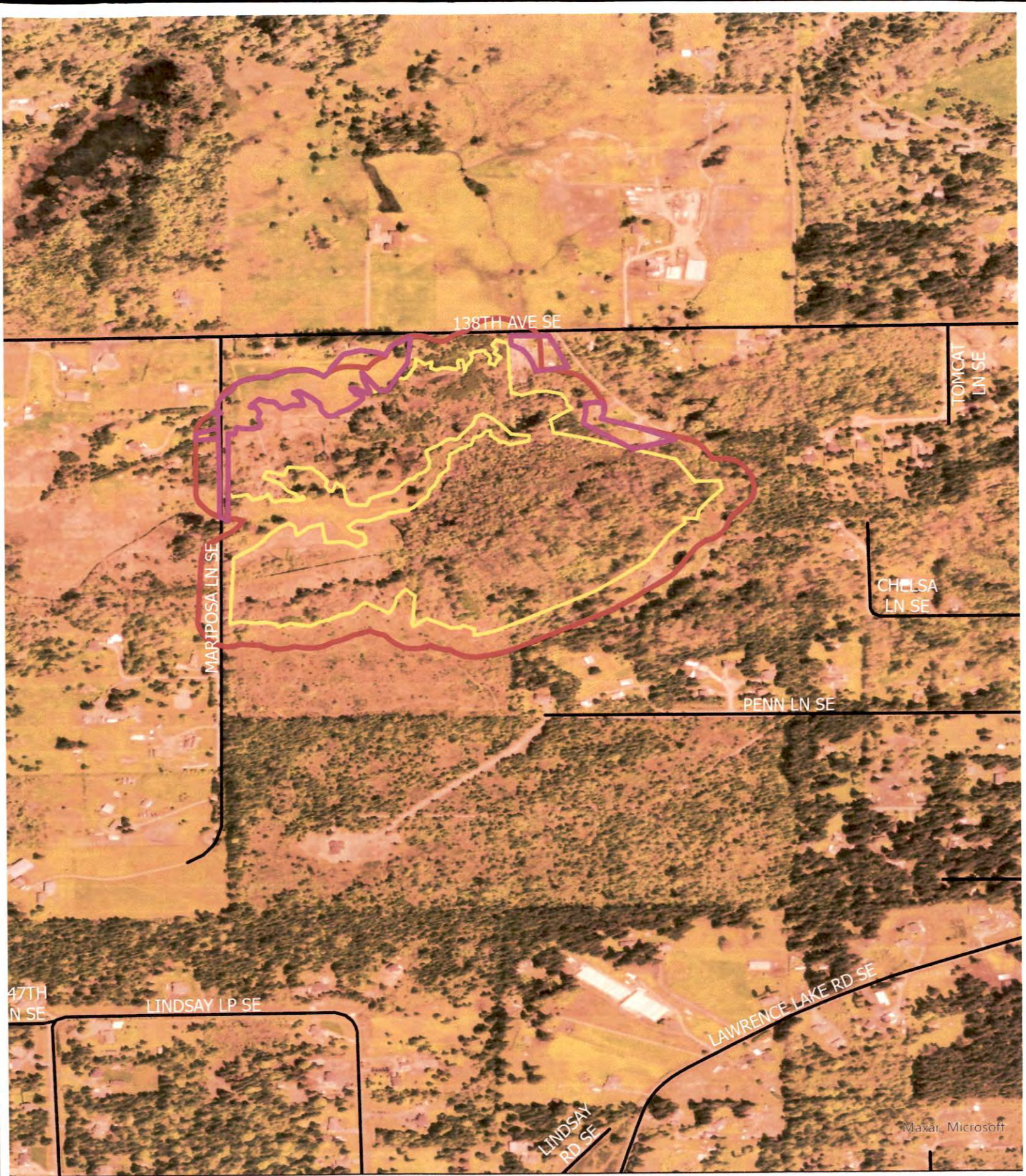
- TMDL - Approved
- 4B - Approved
- STI - Approved
- ARP - Approved
- TMDL - In Development
- STI - In Development
- ARP - In Development

Parcels

- Parcel boundary

Esri, NASA, NGA, USGS, FEMA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

Miles
0 0.5 1 2



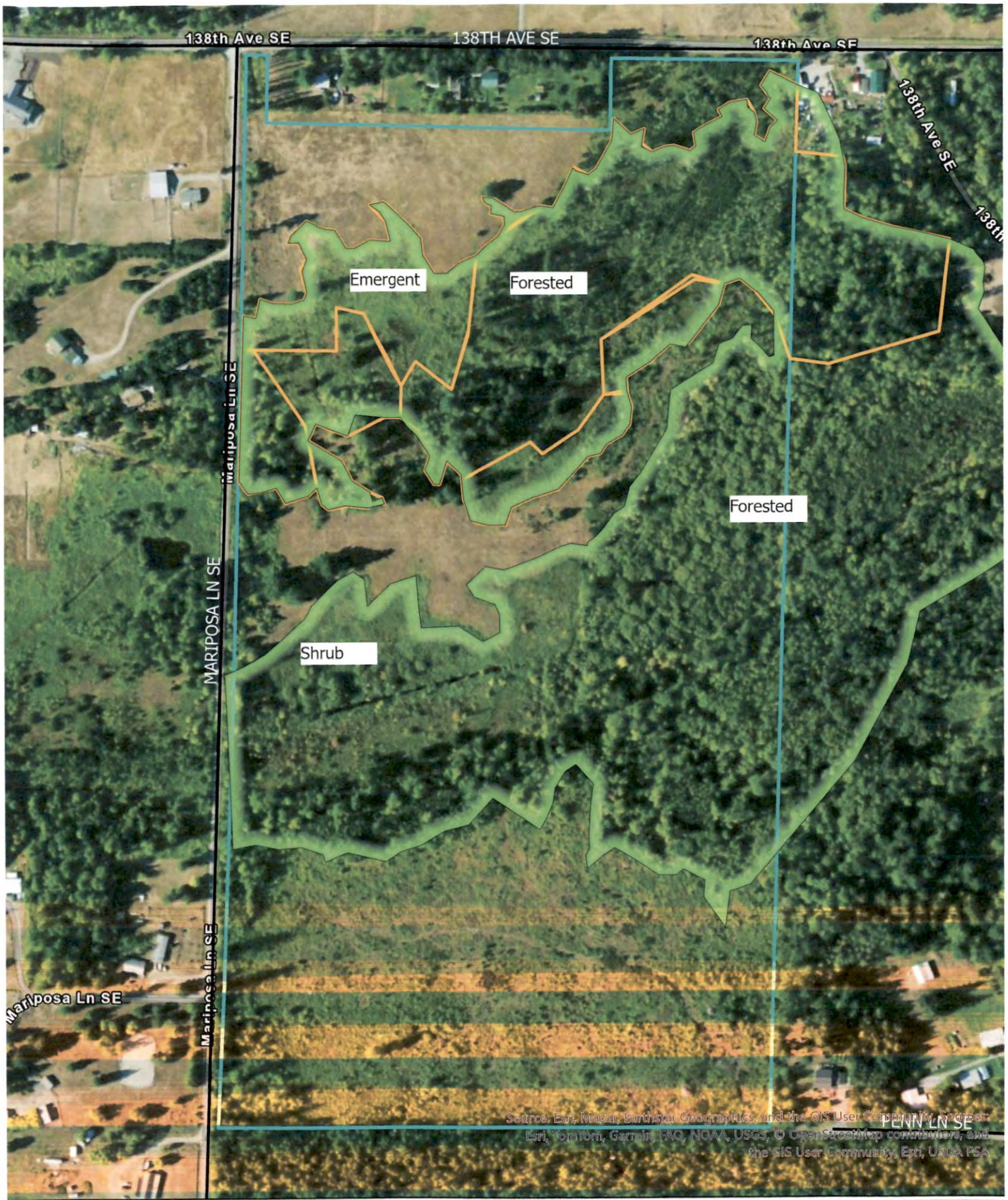
N

LSNW

Land Services Northwest
120 State Avenue NE PMB 190
Olympia, WA 98501

Wetland A
150ft Pollution Generating
Land Use

0 240 480 960 Feet



Land Services Northwest
120 State Avenue NE PMB #190
Olympia, WA 98501
360-481-4208

N

LSNW

Cowardin Classification Map

0 140 280 560 Feet

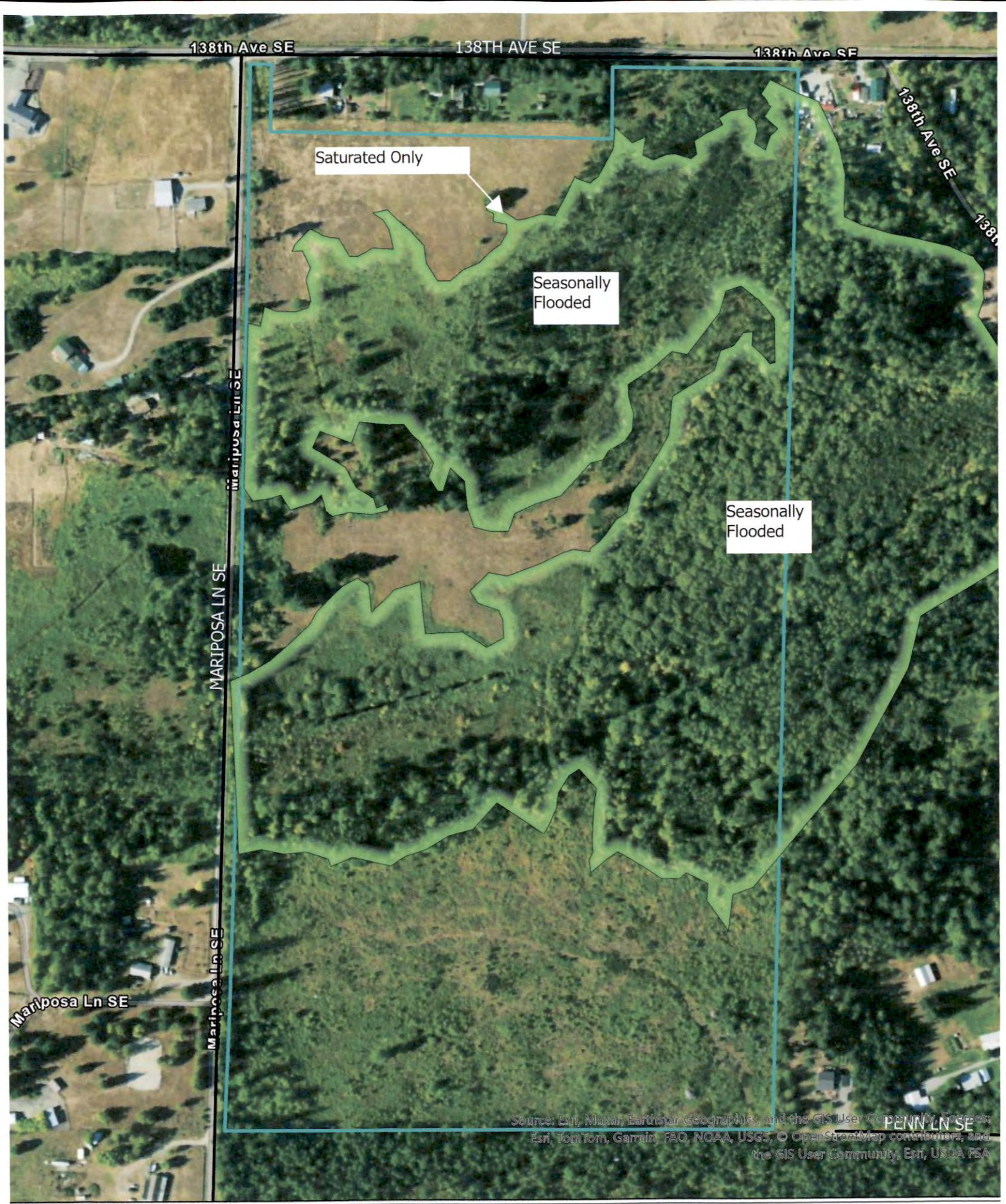
N

LSNW

Land Services Northwest
120 State Avenue NE PMB 190
Olympia, WA 98501

Cowardin Classification Map

0 137.5 275 550 Feet



Land Services Northwest
120 State Avenue NE PMB #190
Olympia, WA 98501
360-481-4208

N
LSNW

Hydroperiod Classification Map

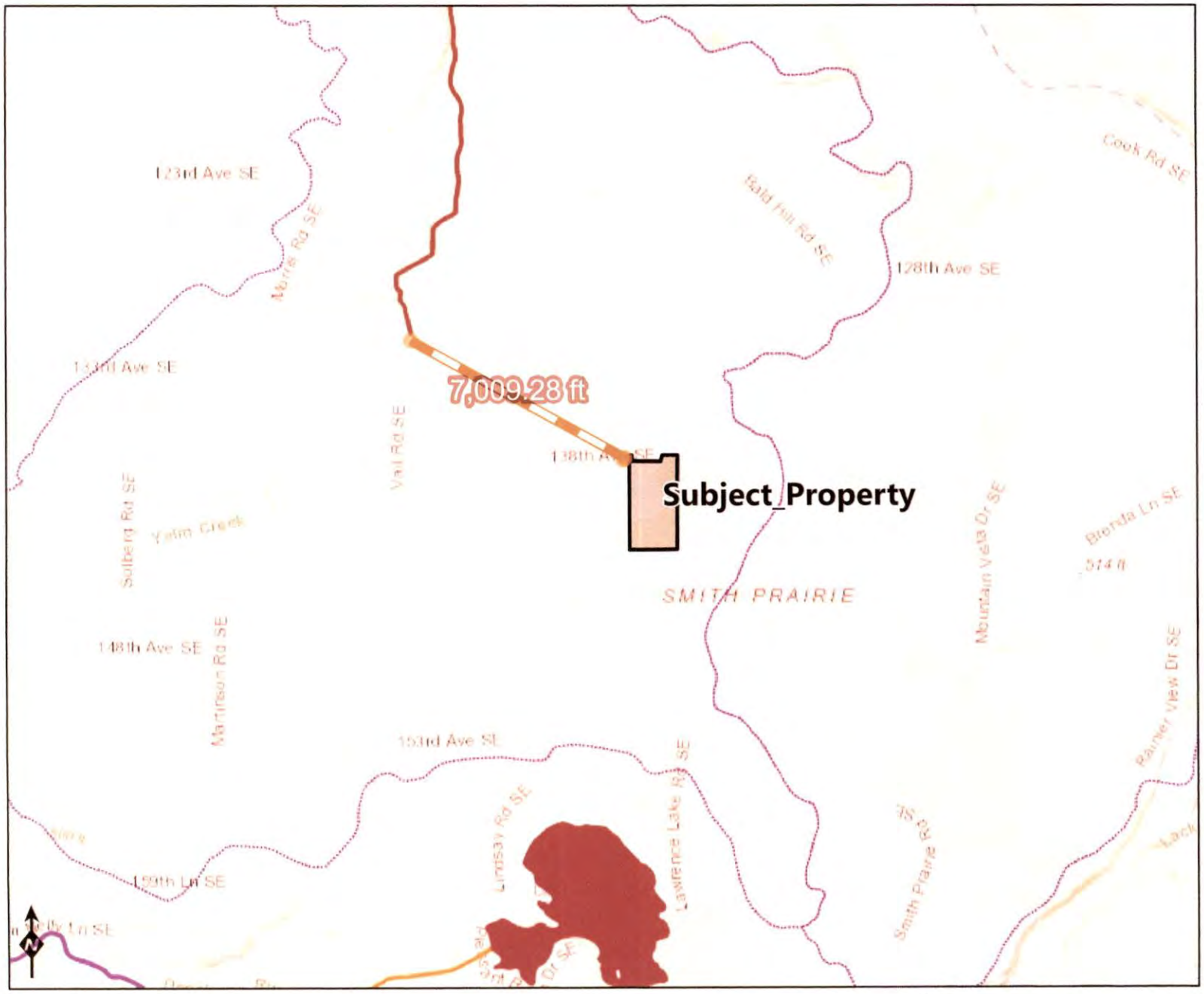
0 140 280 560 Feet

Land Use Calculations

	ACRES	%	
1KM	1152		Percent
Wetland A	21.1		
1KM-WetlandA	1130.9		
High Intensity	2.7	0.002387	0.238748
Relatively Undisturbed	426	0.369792	36.97917
Low Medium Use	702.2	0.609549	60.95486
Accessible Habitat	665	0.588027	58.80272
Wetland A	21.1		
AH-Wetland A	643.9	0.56937	56.93695
RU	285	0.252012	25.20117
Low/Medium LU	357	0.315678	31.56778
High Intensity	1.9	0.00168	0.168008

March 17, 2025

303d Water Quality Atlas Map



Assessed Water/Sediment

Water
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Sediment
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Parcels
- Parcel boundary

Subbasins (12 digit HUCs)
- HUC boundary

Miles
0 0.5 1 2

Esri, NASA, NGA, USGS, FEMA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 2/10/2025

Rated by Alex Callender Trained by Ecology? x Yes ___No Date of training 12/2013

HGM Class used for rating Depressional Wetland has multiple HGM classes? x Y ____N

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

Source of base aerial photo/map ESRI 2024

OVERALL WETLAND CATEGORY II (based on functions ✓ or special characteristics__)

1. Category of wetland based on FUNCTIONS

_____**Category I** – Total score = 23 - 27

X **Category II** – Total score = 20 - 22

_____**Category III** – Total score = 16 - 19

_____**Category IV** – Total score = 9 - 15

FUNCTION	Improving Water Quality			Hydrologic			Habitat			
	Circle the appropriate ratings									
Site Potential	[H]	M	L	H	[M]	L	[H]	M	L	
Landscape Potential	[H]	M	L	H	[M]	L	[H]	M	L	
Value	H	[M]	L	H	[M]	L	[H]	M	L	**TOTAL**
Score Based on Ratings	8			6			9			22

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	Cowardin
Hydroperiods	D 1.4, H 1.2	Hydroperiod
Location of outlet *(can be added to map of hydroperiods)*	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland *(can be added to another figure)*	D 2.2, D 5.2	150ft
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 total habitat	H 2.1, H 2.2, H 2.3	1KM
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	303d
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	TMDL

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 *(can be added to another figure)*	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream *(can be added to another figure)*	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total 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 *(can be added to another figure)*	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total 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	
Hydroperiods	H 1.2	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants *(can be added to figure above)*	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and total habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number A

HGM Classification of Wetlands in Western Washington

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

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

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

NO – go to 2 **YES** – the wetland class is **Tidal Fringe** – go to 1.1

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

NO – Saltwater Tidal Fringe (Estuarine) **YES – Freshwater Tidal Fringe**
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe, it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.

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

NO – go to 3 **YES** – The wetland class is **Flats**
If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland unit **meet all** of the following criteria?
___The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size,
___At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO – go to 4 **YES –** The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?
____The wetland is on a slope (slope can be very gradual),
____The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheet flow, 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).

Wetland name or number __A____

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.

   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

DEPRESSIONAL AND FLATS WETLANDS

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

D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	2
D 1.2. The soil 2 in. below the surface (or duff layer) is true clay or true organic *(use NRCS definitions)*. Yes = 4 No = 0	4
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed plants > 95% of area points = 5 Wetland has persistent, ungrazed plants > ½ of area points = 3 Wetland has persistent, ungrazed plants ≥ 1/10 of area points = 1 Wetland has persistent, ungrazed plants < 1/10 of area points = 0	3
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is ≥ ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	4
Total for D 1 — Add the points in the boxes above	13

Rating of Site Potential If score is: ✓ **12-16 = H** ___ **6-11 = M** ___ **0-5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	1
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3? Source_____ Yes = 1 No = 0	1
Total for D 2 — Add the points in the boxes above	3

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

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list? Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list? Yes = 1 No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality? (Answer YES if there is a TMDL in development or in effect for the basin in which the unit is found.) Yes = 2 No = 0	0
Total for D 3 — Add the points in the boxes above	1

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

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS

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

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

D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4 Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet points = 2 Wetland is a flat depression (question 7 on key), whose outlet is a permanently flowing ditch points = 1 Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 0	2
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part. Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 The wetland is a "headwater" wetland points = 3 Wetland is flat but has small depressions on the surface that trap water points = 1 Marks of ponding less than 0.5 ft (6 in) points = 0	5
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit points = 5 The area of the basin is 10 to 100 times the area of the unit points = 3 The area of the basin is more than 100 times the area of the unit points = 0 Entire wetland is in the Flats class points = 5	3
Total for D 4 — Add the points in the boxes above	10

Rating of Site Potential If score is: __**12-16 = H** ✓**6-11 = M** ___**0-5 = L** *Record the rating on the first page*

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

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

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

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

D 6.1. Is the unit in a landscape that has flooding problems? Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met. The wetland captures surface water that would otherwise flow downgradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds): • Flooding occurs in a sub-basin that is immediately downgradient of unit. points = 2 • Surface flooding problems are in a sub-basin farther downgradient. points = 1 • Flooding from groundwater is an issue in the sub-basin. points = 1 • The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. *Explain why* _____ points = 0 • There are no problems with flooding downstream of the wetland. points = 0	1
D 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 D 6 — Add the points in the boxes above	1

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

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?

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 if the unit is at least 2.5 ac, or more than 10% of the unit if it is smaller than 2.5 ac. **4**

- [X] Aquatic bed
- [X] Emergent
- [X] Scrub-shrub (areas where shrubs have > 30% cover)
- [X] Forested (areas where trees have > 30% cover)

4 structures or more: points = 4
3 structures: points = 2
2 structures: points = 1
1 structure: points = 0

If the unit has a Forested class, check if:

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

H 1.2. Hydroperiods **3**

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 ac to count (see text for descriptions of hydroperiods).

- [X] Permanently flooded or inundated
- [X] Seasonally flooded or inundated
- [ ] Occasionally flooded or inundated
- [X] Saturated only
- [ ] Permanently flowing stream or river in, or adjacent to, the wetland
- [X] Intermittently or seasonally flowing stream in, or adjacent to, the wetland
- [ ] **Lake Fringe wetland** **2 points**
- [ ] **Freshwater tidal wetland** **2 points**

4 or more types present: points = 3
3 types present: points = 2
2 types present: points = 1
1 type present: points = 0

H 1.3. Richness of plant species **2**

Count the number of plant species in the wetland that cover at least 10 ft^2.

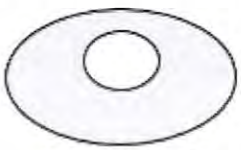
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. **Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canada thistle**

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

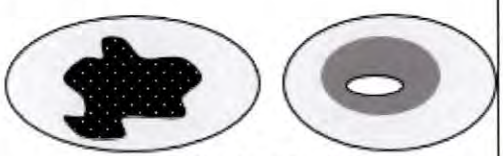
H 1.4. Interspersion of habitats **3**

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

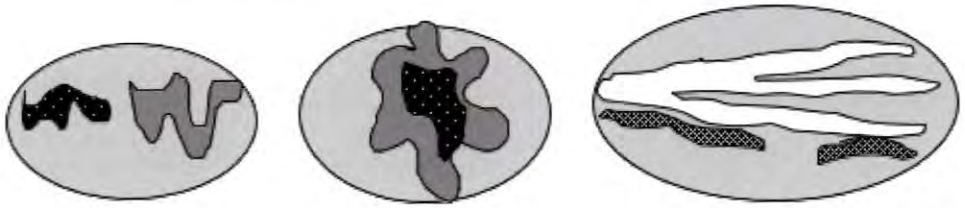


Low = 1 point



Moderate = 2 points

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



Wetland name or number A

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. The number of checks is the number of points. X Large, downed, woody debris within the wetland (> 4 in. diameter and 6 ft long). X Standing snags (dbh > 4 in.) within the wetland X Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) X 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 (cut shrubs or trees that have not yet weathered where wood is exposed) X At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (structures for egg-laying by amphibians) ___ Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 above for the list of strata and H 1.5 in the manual for the list of aggressive plant species)	5
Total for H 1 — Add the points in the boxes above	17

Rating of Site Potential If score is: ✓ **15-18 = H** ___ **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?

H 2.1. Accessible habitat (include only habitat polygons accessible from the wetland. *Calculate:* % relatively undisturbed habitat 10 + [(% moderate and low intensity land uses)/2] 14 = 24 % Total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon — points = 3 20-33% of 1 km Polygon — points = 2 10-19% of 1 km Polygon — points = 1 < 10% of 1 km Polygon — points = 0	2
H 2.2. Total habitat in 1 km Polygon around the wetland. *Calculate:* % relatively undisturbed habitat 30 + [(% moderate and low intensity land uses)/2] 23 = 41.5 % Total habitat > 50% of Polygon — points = 3 Total habitat 10-50% and in 1-3 patches — points = 2 Total habitat 10-50% and > 3 patches — points = 1 Total habitat < 10% of 1 km Polygon — points = 0	− 2
H 2.3. Land use intensity in 1 km Polygon: > 50% of 1 km Polygon is high intensity land use — points = (- 2) ≤ 50% of 1 km Polygon is high intensity — points = 0	0
Total for H 2 — Add the points in the boxes above	4

Rating of Landscape Potential If score is: ✓ **4-6 = H** ___ **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 data — 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	2

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

Wetland name or number __A__

WDFW Priority Habitats

See complete descriptions of Priority Habitats listed by WDFW, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008 (current year, as revised). Priority Habitat and Species List.[133] This list was updated for consistency with guidance from WDFW.

This question is independent of the land use between the wetland unit and the Priority Habitat. All vegetated wetlands are by definition a Priority Habitat but are not included in this list because they are addressed by this rating system.

Count how many of the following Priority Habitats are within 330 ft (100 m) of the wetland unit:

— **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. This habitat automatically counts if mapped on the PHS online map within 100m of the wetland. If not mapped, a determination can be made in the field.

— **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.

— **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire Deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).

— **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.

✓ **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. Do not select if Fresh Deepwater habitat is also present.

— **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.

— **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) diameter at breast height (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.

[133] http://wdfw.wa.gov/publications/00165/wdfw00165.pdf

Wetland name or number _____

— **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak[134] provides more detail for determining if they are Priority Habitats

✓ **Riparian:** The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.

✓ **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.

— **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.

— **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

[134] https://wdfw.wa.gov/publications/00030/wdfw00030.pdf

Wetland name or number A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.*	**Category**
SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to **SC 1.1** No = **Not an estuarine wetland**	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = **Category I** No = Go to **SC 1.2**	**Cat. I**
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species. If non-native species are *Spartina*, see chapter 4.8 in the manual. — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = **Category I** No = **Category II**	**Cat. I** **Cat. II**
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?[135] Yes = **Category I** No – Go to **SC 2.2** SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements. Yes – Submit data to WA Natural Heritage Program for determination,[136] Go to **SC 2.3** No = **Not a WHCV** SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria? Yes = **Category I** No = **Not a WHCV**	**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? *Use the key below.* ***If you answer YES, you will still need to rate the wetland based on its functions.*** 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? Yes – Go to **SC 3.3** No – Go to **SC 3.2** 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? Yes – Go to **SC 3.3** No = **Not a bog** 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? Yes = **Category I bog** No – Go to **SC 3.4** **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? Yes = **Category I bog** No = **Not a bog**	**Cat. I**

[135] https://www.dnr.wa.gov/NHPdata

[136] https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland name or number A

SC 4.0. Forested Wetlands Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as Priority Habitats? ***If you answer YES, you will still need to rate the wetland based on its functions.*** — **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/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). Yes = **Category I** [No] = **Not a forested wetland for this section**	**Cat. I**
SC 5.0. Wetlands in Coastal Lagoons Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? — The wetland 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 *(needs to be measured near the bottom)* — The lagoon retains some of its surface water at low tide during spring tides Yes – Go to **SC 5.1** [No] = **Not a wetland in a coastal lagoon** SC 5.1. Does the wetland meet all of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species in H 1.5 in the manual). — At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland is larger than $^1/_{10}$ ac (4350 ft^2) Yes = **Category I** [No] = **Category II**	**Cat. I** **Cat. II**
SC 6.0. Interdunal Wetlands Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer YES, you will still need to rate the wetland based on its habitat functions.*** In practical terms that means the following geographic areas: — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 and Ocean Shores Blvd SW, including lands west of E. Oceans Shores Blvd SW. Yes – Go to **SC 6.1** [No] = **Not an interdunal wetland for rating** 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)? Yes = **Category I** [No] = Go to **SC 6.2** SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = **Category II** [No] = Go to **SC 6.3** 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? Yes = **Category III** [No] = **Category IV**	**Cat I** **Cat. II** **Cat. III** **Cat. IV**
Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form	N/A