

AGENDA
San Juan County Conservation Land Bank Commission

**Members of the public may participate in person at
SJI Grange, 152 1st St N, Friday Harbor, WA 98250
join virtually by [CLICKING HERE](#)
or by phone @ (253)205-0468 Meeting ID: 864 2185 5108**

September 20, 2024

- 8:30am Convene
- 8:30 General Public Comment Period
- 8:40 Approve August 16, 2024 Meeting Minutes
- 8:45 Partner Update – San Juan Preservation Trust
- 8:50 Council Update – Christine Minney
- 8:55 Chair and Commissioners Reports
 - Upcoming meeting schedule/locations
October 18, Orcas; November 15 Lopez; December 13 or 20
Annual Retreat (location?)
- 9:10 Outreach/Communications Report – Tanja Williamson
 - Communications Committee
 - Informational Flyer and Mailer
 - North Shore Preserve Opening
 - Watmough Head Opening
- 9:40 Break
- 9:50 Stewardship Report
 - Action – Leases of Frazer Homestead and Beaverton Marsh
Preserves
 - Bailer Hill Rd. False Bay Creek Preserve Wetland mitigation
proposal
- 10:30 Directors Report – Lincoln Bormann
 - Update on RCO grants for Watmough Head acquisition
 - Forthcoming projects
- 10:50 2nd Public Comment Period
- 11:05 Future Agenda Items
- 11:10am Adjourn

The Land Bank Commission May Add or Delete Agenda Items and Projects for Discussion. The Agenda Order is Subject to Change. You are invited to call the Land Bank office at 360-378-4402 for more details prior to the meeting. SJC Code 2.116.070 “All meetings and actions of advisory bodies and their subcommittees shall be open to the public, even where such meetings are not within the purview of the Open Public Meetings Act, Chapter 42.30 RCW, except where the meeting is properly closed for executive session, as provided in RCW 42.30.110”

Summary of Values of Land Bank Purchases

Number of Purchases / Donations	Appraised Value of Purchases 1990-2022	Land Bank Expenditures	Partner Expenditures	Non-acquisition partner contributions	Donations of Property	Land Bank Assists on Other Projects
68 / 7	\$87.6M	\$49M	\$33.5M	\$1.9M	\$7.5M	\$12.4M
Total Purchase Price	\$82.9M		Total Partner Contributions: \$53M			
Number of CE Purchases / Donations	Appraised Value of Purchases 1990-2022	Land Bank Expenditures	Partner Expenditures		Donations of CEs	
33 / 15	\$10.7M	\$7M	\$1.8M	n/a	> \$5M est.	
Total Appraised Value LB Projects: \$98.3M*		Total Appraised Value All Projects: \$109.4M*				
Total LB Expenditures: \$56M		Total Partner Contributions All Projects: \$62.1M				

*Does Not Include CE Donation Value

7-15-24

STEWARDSHIP & OUTREACH REPORT
SEPTEMBER 2024

OUTREACH

Staff: Tanja Williamson

It's hard to believe it's only been one month since the SJC Fair! A big thanks to everyone that helped support the Conservation Land Bank this year. The seed-to-flower matching game, developed by Margo, was thoroughly enjoyed by fair goers of all ages (Photo 1). Many locals attended Lincoln's presentation on Climate Resiliency and Eliza's talk on How to Grow Wildflowers in the San Juan Islands (Photos 2-3). Copies of Eliza's new guide for growing wildflowers were also handed out to happy recipients! The annual Fall Native Wildflower Sale is now "live" online. A guide to the sale is available [HERE](#).

Other outreach activities have included responding to hunting inquires and providing subsequent letter(s) of permission and preparing for the fall newsletter. The walking series with the Mullis Senior Center kicked off with a hike at Beaverton Marsh Preserve, and several volunteer days are in the works (Photo 4). Elliot Burch, gold-star volunteer and resident of San Juan Island, built a kiosk for installation at North Shore Preserve, which has been a hotspot of activity lately, both on the ground and behind the screen. On National Public Lands Day (9/28), the community is invited to celebrate this milestone: the opening of North Shore Preserve (Photo 5)!

SALISH SEEDS NURSERY

Staff: Eliza Habegger, Margo Thorp

August rains provided a welcome relief from watering duties. September priorities have included seed processing and preparing for the Fall Native Wildflower Sale. Seed samples have been sent to a seed lab to test for germination, weed seed, and purity, as required by WA state law for any seed that we sell to others.

DISTRICT 1

Staff: Doug McCutchen, Charlie Behnke, Jacob Wagner, Shauna Barrows

Beaverton Marsh: There's been plenty of activity on the farmland portion of the Preserve. Farm gates are being hung, a solar water system is being installed, and access, including parking improvements, are in the works. The Grange harvested their potato crop and is now preparing the previously tarped area for fall plantings.

Frazer Homestead: The lessees, the Shephard family, are replacing and improving the pond exclusion fence and getting set up for a possible brief fall grazing. SJI Conservation District (SJICD) is prepping the new island marble butterfly plots for seeding.

Zylstra Lake: SJICD and Land Bank staff, and the farm lessee, are collaborating on a small pasture prairie trial in the hay fields.

DISTRICT 2

Staff: Peter Guillozet, Tyler Goodman, Mary Gropp

Coffelt Farm: Staff from the SJICD and the Land Bank, and farm lessee will also collaborate on a small pasture prairie trial in the hay fields. Initial investigations into recent septic issues indicate that the system is failing and will require major repairs or replacement in near future. Peter has requested a cost estimate.

Coho: Peter met with several members of a local traditional foodways group to discuss their interest in Cascade Creek flow issues.

Crescent Beach: Erin and Peter met with staff from Department of Natural Resources to hike and discuss specifics, including timing, for the forest thinning grant award (Photo 6).

Judd Cove: Peter met with a neighbor to review options to prevent preserve users from crossing onto private property. In response, staff will add signage and make efforts to close a social trail.

North Shore: Capping a two-year, multi-phase project, last week marked the end of a month-long push to complete major restoration grading and parking lot construction. Peter focused mainly on construction management, well rehabilitation and testing, and signage. Tyler's been on point for weeds, forest thinning, and trail development, and Mary collected and spread several

pounds of wetland and upland seed (Photos 7-11). Jacob and Shauna helped install the kiosk for the trailhead, bicycle racks, and bollards. Leading up to the September 28th opening, our focus will be on seeding and strawing, signage, trail and parking refinements and other tasks. Over the next five months, staff, contractors and volunteers will install another 15,000 herbaceous and woody plants to round out new forest and wetland habitats. (Join us in the field!)

Turtleback Mountain: Mary led a three-person crew focused on weed management along the Morning Ridge Trail. Peter did a short interview with a Canadian podcaster and led a small group of Garry oak enthusiasts on the ‘Seasons of Turtleback’ hike. A San Juan County Deputy responded to a report of two aggressive, off-leash dogs on the northern portion of the Preserve.

DISTRICT 3

Staff: Amanda Wedow, Cedar Charnley

FB Spit: Italian arum seed head removal continues. Over the summer, staff and volunteers have pulled many plants, and now that the berries are ripening and turning red, those that remain are highly visible. Removing the seed heads helps to prevent spread from birds, on the Preserve and to neighboring properties (Photo 12).

Lopez Hill: Hunting season for archery opened September 1st. Orange vests and signage about hunting information was posted at four entry points. Tanja is helping to reply to hunter inquiries and provide written permissions. The new trail is nearing completion. One puncheon was completed, and another is being formulated. The Lopez Community Land Trust signed a revised trail easement, and discussions for trail access approvals across two adjacent properties are underway.

Watmough: The outhouse in the BLM parking lot was oddly vandalized; someone stole the steel holder bar for the toilet paper. A temporary wooden dowel was installed by staff. Amanda also supported the BLM by performing their visitor satisfaction surveys on a few afternoons. New identification stickers were installed on the three Land Bank mooring buoys (Photo13). Over time the paint had faded, and several boaters commented on the lack of information. Kwiaht is undertaking an acoustic monitoring research project. The underwater microphone will be deployed off one of the buoys, with the goal of recording and identifying various fish in the bay.

Staff continue to work towards opening the new trail by finalizing a draft SMP, completing various RCO grant requirements, and working on site cleanup and public access improvements. A cultural resources contract is out for signature to provide a monitoring plan and onsite monitoring during site work. Amanda prepared a Request for Proposal for the sport court removal. Erin and Amanda also revised the initial draft of the SMP and incorporated many comments received during the internal review. Now the SMP is being shared with the public for a 30-day comment period. Representatives from [HistoriCorps](#) will visit the site in November to assess the buildings and prepare a “Phase 1” project proposal. Amanda led two guided walks, which were well attended. Hunting season is also open on the National Monument lands. Since adjacent Land Bank properties are not open to hunting, staff posted ‘No Hunting’ signs and created a map of the hunting and no hunting areas.

Photos



Photo 1. Rhetta gives Margo’s seed matching game a double thumbs up!



Photo 2. The CLB fair booth was a popular place!



Photo 3. Lincoln presents at the fair on Climate Resiliency.



Photo 6. Gene Phillips (DNR) and Peter discuss forest health at Crescent Beach Preserve.



Photo 7. A late nestling was discovered in the swallow structure at North Shore Preserve



Photos 8-9. Metamorphosis never looked so cute! These critters were set aside in a holding tank while the pond was drained and modified into wetlands, at North Shore Preserve



Photo 10. Peter and Mary seeding the wetland at North Shore Preserve, prior to the recent rainfall.



Photo 11. Late summer rains partially fill new wetlands at North Shore Preserve.



Photo 12: Italian arum seed heads are highly visible amongst the snowberry at Fisherman Bay Spit Preserve.



Photo 13. Public mooring buoys at Watmough Bay Preserve receive bold new stickers.

AGRICULTURAL LEASE AGREEMENT
BETWEEN THE SAN JUAN COUNTY LAND BANK AND
(SHEPHARD FAMILY ENTERPRISES)

This Lease Agreement is entered into between Lessor San Juan County, acting through the San Juan County Land Bank ("Land Bank") and Lessee (**SHEPHARD FAMILY ENTERPRISES**).

WHEREAS, the Land Bank is the owner of approximately 63 acres of agricultural and forest land (TPN #340221003, 340221001, 340221004, 340224002, 340224001, AND 340224003) on Cattle Point Road on San Juan Island, known as the Frazer Homestead Preserve ("Property"); and

WHEREAS, the Lessee wishes to lease a forty (40) acre portion of the Property from the Land Bank exclusively for agricultural purposes. The Agricultural Lease Area (ALA) is outlined in the map along with a description of the ALA in attachment B; and

WHEREAS, the Land Bank is willing to allow the permissive use of approximately ten (10) acres of pasture in the southern area of Parcels E and F of the Preserve for grazing or mowing under a revocable license. The Licensed Use Area (LUA) is outlined in the map along with a description of the LUA in attachment B; and

NOW, THEREFORE, the parties agree to enter into this agricultural lease on the following terms and conditions:

1. **Leased Property.** The Land Bank agrees to lease the 40-acre ALA of the Property to the Lessee, and the Lessee agrees to lease the 40 acre ALA of the Property from the Land Bank. Lease area includes all fenced pasture within Parcels A, B, C, and D The Property is legally described in Attachment A, and a map of and description of the ALA in Attachment B. Within the ALA there is approximately ¼ acre fenced exclusion area managed by the Land Bank and partners for island marble butterfly habitat.

2. **Term.** The Lease term shall commence in 2024 at the time this Lease is signed by both Land Bank and Lessee and shall terminate on **DECEMBER 31ST 2030** provided that the Lessee shall have the right to renew the lease for three successive additional five-year terms, for a total of 20 years, as long as Lessee has met all of the provisions of the Lease, with the exception that if the Land Bank REET is not fully reauthorized at one percent (1%) by December 31, 2026, the Land Bank may terminate this option to renew at its sole discretion, no later than April 1, 2027. At the end of the initial five-year term a renewal of the Lease shall be in writing, in the form of a deed and recorded by the Land Bank. The Land Bank is not obligated to renew the Lease if the Lessee has been in default regarding any of the terms of the Lease. An updated farm plan shall be appended to the five-year lease renewal. All changes to the plan must be approved by the Land Bank. If, in the sole judgment of the Land Bank, the changes to the farm plan are major, the Land Bank reserves the right to not extend the Lease for a subsequent five-year term.

3. **Rent.** The rental payment shall be \$1,200 per year, payment of which is to be paid to the Land Bank by the first business day of each month and is delinquent if not paid on or before the tenth day of the month. Rent shall be paid to the Land Bank at the address stated below or at such other place as the Land Bank designates.

San Juan County Land Bank
350 Court Street, # 6
Friday Harbor, WA 98250

4. **Rent Adjustments.**
The rental payment shall be adjusted at the end of each five-year period during the life of the Lease. The adjustment shall be based on changes to the Seattle -Tacoma – Bellevue Consumer Price Index all items (CPI) as follows:

$$\text{Original Rent} \times \frac{\text{CPI Current Year}}{\text{CPI Starting Year}} = \text{Current Rent}$$

Rent may also be adjusted to reflect the addition of new infrastructure that is paid for by the Land Bank. Adjustments will be negotiated prior to installation of improvements.

Rent may also be adjusted if the Land Bank and Lessee agree on a reduction or increase of ALA acreage.

5. **Late Charges.** If payment of the rent is more than 30-days late, a late fee of 10% of the amount of the monthly rent can be charged for each month that the rent is overdue. Nothing in this paragraph shall prevent the Land Bank from exercising its rights under paragraph 20.

6. **Property "As Is."**
The Lessee is leasing the ALA property "as is" in its present condition. The agricultural and other characteristics of the ALA property, its current use and existing improvements, are described in a Present Conditions Report prepared by the Land Bank and acknowledged by the Land Bank and the Lessee to be complete and accurate as of the date of this Lease. The report is attached to this Lease as Attachment B. By signing this Lease, the Lessee acknowledges that they are personally familiar with the condition of the ALA property and agree to lease said ALA property in its existing condition.

The Land Bank will be conducting necessary maintenance, repairs, and improvements on the ALA property during the term of this lease. The Land Bank shall have sole discretion over and control of these activities and will make every effort to coordinate with Lessee to minimize disruptions caused by this work. The following further defines responsibilities:

The Land Bank will provide the following:

- A. **Soil testing.** Land Bank will conduct soil testing approximately every 3 years, including but not limited to standard analysis of organic matter, nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg), sodium (Na), and soil pH (acidity) to monitor soil quality and fertility; and
- B. **Fencing repair, maintenance, installation.** Land Bank will maintain perimeter

fencing of the ALA. For interior permanent fencing, Land Bank will supply the fencing materials and Lessee will provide the labor for fence projects agreed upon by both parties; and

- C. Solar water system installation, repairs, and maintenance. Land Bank will install and maintain a solar pump to fill a water storage tank. Lessee will be responsible for water system improvements beyond the initial storage tank; and
- D. Land Bank Preserve signage. Lessee and Land Bank will collaborate on signage and information at other appropriate locations to guide and inform visitors.
- E. Management for all areas outside of the ALA and LUA. Land Bank is responsible for all areas beyond the boundary as indicated on map in attachment B; and any new improvements related to public use or other collaborators such as expanded parking area.
- F. Noxious and invasive weeds. Land Bank will take all measures reasonably necessary to control state listed noxious weeds on the Property outside of the ALA.
- G. Livestock Biosecurity. Land Bank and Lessee will collaborate on protocols to the reduce the potential for introduction and spread of livestock disease on the Property.
- H. Partner Collaborations. Land Bank will coordinate with Lessee and partners that are involved in accessing the ALA or LUA for island marbled butterfly plots, pasture prairie trials, and other any future projects to minimize impacts to agricultural operations.

The Land Bank will consider the following:

- A. Soil health. Collaborations on soil amendments and/or other pasture improvements with Lessee; and
- B. Best Management Practices (BMP's) cost share projects. Financial contributions towards projects agreed upon by both parties.
- C. Additional infrastructure. Financial contributions that support agricultural viability, community engagement and/or education.

7. **Licensed Uses in LUA.** The Lessee is granted a revocable license authorizing Lessee to graze animals or harvest hay the southern fenced 10 acre LUA of the Preserve during the term of this agreement. Use of the LUA is not part of the lease, but is a revocable license for the sole purposes of either grazing or harvesting hay. This license is revocable by either party at any time upon 14 days written notice to the other party.

There are currently two exclusion areas within the LUA. Including approximately ½ acre fenced island marble butterfly habitat area, managed as a partnership between the San Juan Preservation Trust (SJPT) and Land Bank. Currently a ¼ acre pasture prairie trial is underway in southeast corner of the LUA, project managers will provide exclusion fencing as needed. Use of

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these areas shall be restricted and remain accessible to personnel involved with the projects.

8. **Permitted Uses.** This Lease is solely for agricultural purposes as described in the Farm Plan of the Lessee which is attached to this Lease as Attachment C. Minor changes to the Farm Plan may be made by written consent of the Land Bank staff. Significant changes must be made through the Lease amendment process. By way of example, adding a livestock shelter to the Farm Plan may be done by written consent of staff. Changing the plan to include planting an orchard must be through formal amendment.

9. **Farming Practices.** Lessee may use the Property for their farming or other agricultural activities as provided for in paragraph 7 and for no other purpose, and in so doing shall:

A. **Use agricultural Best Management Practices (BMP's).** Practices will be consistent with a San Juan Islands Conservation District's (SJICD) Individual Stewardship Plan developed for the Lease Area; and

B. **Farming activities.** Use farmland for activities consistent with the Lessee's proposed Farm Plan as set out in Attachment C; and

C. **Maintain compliance.** Comply at all times with all applicable federal, state and local laws, codes, regulations applicable to the Leased and Licensed area; and

D. **Protect sensitive habitat and resources.** The pond and seasonal wet pasture and drainages on the Property provide valuable water resources, wildlife habitat and agricultural benefits. Such areas shall be protected from nutrient and sediment-laden runoff, soil compaction and other unnecessary disturbance through observance of seasonal, limited duration grazing, appropriately timed haying and other sound agricultural practices. Land Bank may, at its expense, conduct periodic monitoring of vegetation cover and water quality.

E. **Maintain soil health.** Maintaining and improving soil health and fertility, while protecting water quality, is a priority for the Land Bank and Lessee. Lessee and Land Bank will collaborate in the development of a soil nutrient management strategy. Land Bank and Lessee may consider a cost share agreement for soil inputs with Land Bank having sole discretion over their investment in inputs. Soil test results will be reviewed at time of renewal to help assess successful stewardship of the soil.

F. **Noxious and invasive weeds.** Lessee will take all measures reasonably necessary to control state listed noxious weeds within the ALA. Control measures will be consistent with the Land Bank's integrated pest management guidance document. Land Bank will collaborate on control within the ALA as needed for species requiring a high level of management, such as English hawthorn.

G. **Use water responsibly.** Lessee understands the physical and legal limitations of water for agricultural and commercial use on the Farm and will take efforts to conserve the resource and use sustainably. If the operation overburdens the resource, adjustments will be made by Lessee to reach an appropriate use level.

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H. Fence Vegetation Management. While recognizing the pollinator and other benefits provided by native hedgerows, Lessee shall manage woody vegetation along fence lines within the ALA to reduce damage and encroachment into pastures.

I. Tree Management. Lessee may cut young fir and pine groves within the ALA as needed to reduce spread, create shade areas, utilize for building projects, wood chips, biochar, etc. Mature forest areas with trees over 12” diameter at breast height may not be cut without permission from Land Bank.

J. Promotion and Marketing Materials. Lessee will acknowledge the Land Bank when appropriate at events and in promotional and marketing materials such as Farm tours, educational events, websites, social media, farm store, farmer’s market booths, press releases, etc.

K. Submit annual report. Lessee will provide an annual report by February 1st of each calendar year including the following: overview of farm activities, stewardship and soil health practices employed.

10. Environmental Indemnity. Lessee agrees to indemnify the Land Bank, to the extent provided by law, for any actions, damages, liability or expenses under federal, state or local environmental laws for environmental conditions existing on the Property after the execution date of this Agreement, including but not limited to any claims, damages or losses arising from the improper storage, disposal, transportation or treatment of solid or hazardous waste on or around the Property, including but not limited to fertilizers, pesticides, herbicides, paint and other toxic materials on or around the Property; noise control concerns on or around the Property; and any other violation or alleged or potential violation of a county, state, or federal environmental law.

11. Expenses. The Lessee shall pay all expenses incurred in connection with the Lessee’s farming activities unless otherwise agreed upon.

12. Ownership and Disposition of Improvements. No improvements or structures shall be added to the Property without the written consent of the Land Bank. Approved improvements or structures are listed in Attachment D. Additional improvements or structures shall be approved by an amendment to Attachment D. This written amendment shall be signed by both the Lessee and the County Administrator and include the ownership of the improvement, required insurance coverage, if any, and the agreed disposition of the improvement upon the termination of the Lease. Each such consent shall be executed in the form of a deed and recorded as an amendment to this Lease.

13. Personal Property. Any and all personal property in and about the premises belonging to the Lessee or the Lessee's agents or invitees or any person claiming by, through or under the Lessee, shall be at the sole risk of the Lessee. The Land Bank shall in no event be responsible for insuring said personal property, and the Lessee agrees to hold the Land Bank harmless from any claim made by a third party asserting damage to any such personal property.

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14. **Inspection.** The Land Bank may, at any reasonable time, enter upon the Property to inspect the same or to perform any work which the Land Bank has the right or the duty to perform. The Land Bank may schedule educational or site tours by the public with seven days advance notice to the Lessee.

15. **Free of Liens.** The Lessee will keep the Property free and clear of all liens of any nature whatsoever.

16. **Insurance.** The Lessee shall maintain **GENERAL** comprehensive liability insurance in an amount not less than \$1,000,000, or if greater, to the limit of the policy for combined single-limit bodily injury, including wrongful death, or property damage to defend and indemnify all activities and services covered by this Agreement with a commercial insurance carrier protected under the State of Washington Guaranty Fund or with a risk pool approved by the Insurance Commissioner. Such insurance shall be endorsed to include San Juan County, its officers, elected officials, employees and agents as an additional insured, and shall not be reduced or cancelled without thirty (30) days prior written notice to the Land Bank.

Each insurance shall be endorsed to include language containing a “cross liability” or “separation of insureds” indicating essentially that except with respect to the limits of insurance, and any rights or duties specifically assigned in the coverage part to the first named insured, this insurance applies as if each named insured were the only named insured, and separately to each insured against whom a claim is made or a suit is brought. Any payment of a deductible or self-insured retention shall be the sole responsibility of the Lessee.

17. **Indemnification.** The Lessee agrees to indemnify and hold the Land Bank harmless from any claim for damage to person or property made by the Lessee or any of its agents or employees or anyone else claiming by, through or under the Lessee, or by any visitor, invitee or other person.

The parties release each other and their respective authorized representatives from any claims for damage to any person or to the premises and to the fixtures, personal property, Lessee’s improvements and alterations of either the Land Bank or the Lessee in or on the premises that are caused by or result from risk insured under any insurance policies carried by the parties and in force at the time of such damage.

18. **Subleasing and Assignment.** Lessee shall not sublease or assign this Lease or any of their rights thereunder to any other party without the written permission of the Land Bank.

19. **Dispute Resolution.**

A. Any controversy or claim arising out of or relating to this Lease that is not resolved through mediation, shall be resolved by final and binding arbitration pursuant to RCW 7.04A. Demand for arbitration shall be made in writing to the other party. The arbitration shall be held in San Juan County before a single arbitrator selected by the agreement of the parties. If the parties cannot agree upon an arbitrator within fifteen (15) days after the demand for arbitration is made,

the arbitrator shall be selected by a judge in the Superior Court of San Juan County in accordance with the procedures set out in RCW 7.04A.110.

B. Unless the parties agree otherwise in writing, the arbitration hearing shall occur no later than sixty (60) days after the date the arbitrator is appointed.

C. The parties agree that, with the exception of the circumstances set out in RCW 7.04A.230, the arbitrator's decision shall be binding, final and not appealable to any court of law.

D. Each party shall pay its own costs of arbitration including attorney's fees. The arbitrator's fee and any administrative expenses imposed by the arbitrator shall be shared equally by the parties.

E. This Lease shall be governed by laws of the state of Washington, both as to interpretation and performance.

20. **Default.** This Lease is subject to Lessee's performance of the duties set out in this Lease. If Lessee defaults in performance of the of the duties, and the breach continues for more than **30** days after Lessee receives written notice of the default, the Land Bank may, at its option:

A. Pursue any legal remedy to recover for the breach, and continue this lease agreement in force; or

B. Declare this Lease agreement forfeited, reenter the Property and remove all Lessee's property from the Property; or

C. Terminate Lessee's right to possession of the Property.

Upon surrender of the premises, the Lessee shall give up ownership of any crops on the Property at the time of the default.

21. **Condemnation.** If the Property, or any part of the Property, shall be taken by condemnation or eminent domain or sold under threat thereof and the remaining portion is not reasonably suited for the Lessee's use, then this Lease may be terminated by either party as of the date of the taking by notice given by either part to the other within sixty (60) days after the taking. If not terminated the rent shall be equitably adjusted. The date of the taking shall be considered as the date the condemner takes possession of the property.

22. **Nonwaiver.** The failure of either the Land Bank or the Lessee to insist upon strict performance of any covenant or agreement of this Lease shall not be construed as a waiver of such covenant or agreement, each of which shall remain in full force and effect.

23. **Notices:** Any notice required to be sent by either party to the other shall be effective if sent by United States Mail, registered or certified, return receipt requested, postage prepaid and addressed to the Land Bank or the Lessee as follows:

San Juan County

Lessee

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Land Bank
350 Court St. #6
Friday Harbor, WA 98250

SHEPHARD FAMILY ENTERPRISES
514 Kiehl Road
Friday Harbor, WA 98250

24. **Binding Effect.** This Lease is the entire agreement of the parties and can be modified only by written agreement. The Lease shall be binding upon the Land Bank and the Lessee, and their respective successors, administrators, executors, heirs and assigns. No modification or alteration to this Lease shall be effective without a written change signed by the party bound thereby. The provisions of this Lease shall be interpreted in accordance with the laws of the state of Washington.

25. **Recordation.** This Lease will be recorded by the Land Bank.

Dated this _____ day of _____, 202_.

(Lessee), Governor

Lincoln Bormann Director

By: _____
Date

By: _____
Date

APPROVED AS TO FORM ONLY
AMY S.VIRA
San Juan County Prosecuting Attorney

REVIEWED BY COUNTY MANAGER
Jessica Hudson
County Manager

By: _____
Date

By: _____
Date

State of Washington)
) ss
County of San Juan)

I certify that I know or have satisfactory evidence that **Phil Shephard** is the person who appeared before me and said person acknowledged that (he/she) signed this instrument, on oath stated that (he/she) was authorized to execute the instrument and acknowledged it as the Governor of **Shephard Family Enterprises** to be the free and voluntary act of the said corporation for the uses and purposes mentioned in the instrument.

(Signature)

Title

My appointment expires: _____

State of Washington)
) ss
County of San Juan)

On this ___ day of _____ 2024, before me personally appeared _____ to me known to be the _____ of the entity that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said entity, for the uses and purposes therein mentioned, and on oath stated that she was authorized to execute said instrument.
In Witness Whereof I have hereunto set my hand and affixed my official seal the day and year first above written.

Notary public in and for the state of
Washington residing at _____
My appt. expires: _____

**ATTACHMENT A
LEGAL DESCRIPTION
LEGAL DESCRIPTION**

PARCEL A:

That portion of the Southeast Quarter of the Southwest Quarter of Section 35, Township 35 North, Range 3 West, W.M., lying East of the East margin of Cattle Point Road, as conveyed to San Juan County under Auditor's File No. 65985, and South of the South margin of County Road No. 160;

ALSO, the North 200 feet, as measured along the East line of that portion of Government Lot 3 in Section 2, Township 34 North, Range 3 West, W.M., lying East of the East margin of Cattle Point Road, as conveyed to San Juan County under Auditor's File No. 65985;

PARCEL B

The North 705 feet, as measured along the East line of that portion of Government Lot 3 in Section 2, Township 34 North, Range 3 West, W.M., lying East of the East margin of Cattle Point Road, as conveyed to San Juan County under Auditor's File No. 65985;

EXCEPT the North 200 feet of said Government Lot 3, as measured along the East line thereof.

PARCEL C:

The North 1178 feet, as measured along the East line of that portion of Government Lot 3 in Section 2, Township 34 North, Range 3 West, W.M., lying East of the East margin of Cattle Point Road, as conveyed to San Juan County under Auditor's file No. 65985;

EXCEPT the North 705 feet of said Government Lot 3, as measured along the East line thereof.

PARCEL D:

The North 1628 feet, as measured along the East line of that portion of Government Lot 3 and the Southeast Quarter of the Northwest Quarter of Section 2, Township 34 North, Range 3 West, W.M., lying East of the East margin of Cattle Point Road, as conveyed to San Juan County under Auditor's File No. 65985;

EXCEPT the North 1178 feet of said Government Lot 3, as measured along the East line thereof.

LICENSE USE AREA: Portions of Parcels E and F, see map below.

CONTINUED

PARCEL E:

That Portion of the Southeast Quarter of the Northwest Quarter of Section 2, Township 34 North, Range 3 West, W.M., San Juan County, Washington, lying East of the East margin of Cattle Point Road, as conveyed to San Juan County under Auditor's File No. 65985, records of said County;

EXCEPT the North 1628 feet of said Southeast Quarter of the Northwest Quarter of said Section 2, as measured along the East line thereof;

ALSO EXCEPT that portion of the said Southeast Quarter of the Northwest Quarter, lying South of the following described line:

Commencing at the North Quarter corner of said Section 2, which point is marked by a concrete monument, from which the Center of said Section 2, which point is also marked by a concrete monument, bears South 00°10'35" West, 2619.85 feet; THENCE along said Center of Section line, South 00°10'35" West, 2025.52 feet to the TRUE POINT OF BEGINNING of said line; THENCE leaving said Center of Section line, South 89°37'46" West, 1112.53 feet to the East margin of said Cattle Point Road and the terminus of said line.

PARCEL F:

That portion of the Southeast Quarter of the Northwest Quarter of Section 2, Township 34 North, Range 3 West, W.M., San Juan County, Washington, lying East of the East margin of Cattle Point Road, as conveyed to San Juan County under Auditor's File No. 65985, records of said County;

EXCEPT that portion of said Southeast Quarter of the Northwest Quarter lying North of the following described line:

Commencing at the North quarter corner of said Section 2, which point is marked by a concrete monument, from which the Center of said Section 2, which point is also marked by a concrete monument, bears South 00°10'35" West, 2619.85 feet; THENCE along said Center of Section line, South 00°10'35" West, 2025.52 feet to the TRUE POINT OF BEGINNING of said line; THENCE leaving said Center of Section line, South 89°37'46" West, 1112.53 feet to the East margin of said Cattle Point Road and the terminus of said line.

Situate in San Juan County, Washington.

ATTACHMENT B PRESENT CONDITIONS REPORT

Fences and Gates: A woven wire fence in good condition follows the north and western boundary of the Farm. A four-strand barbed wire fence of poor condition follows the eastern boundary from the southeast corner to about the middle of the eastern boundary, and a five-strand barbed wire fence of average condition finishes the eastern boundary in thick brush. A five-strand barbed wire fence of good condition follows the southern boundary of the Licensed use area. The exclusion fence surrounding the pond needs replacing with woven wire. There are two gates into the property: One 12' gate off Rosler Road, and another 12' gate off Cattle Point Road, on the southwest end of ALA. The gates are in good condition.

Parking Area: The Land Bank may improve the farm access gate off Rossler road for easier farm access. In addition, there may be a small parking area added to support farm use and possibly access to the existing public trail.

Public Trail: Outside of the ALA, along the western boundary of the preserve, bordering Cattle Point Road there is a public walking trail (American Camp Trail) that a connection route from town to the National Historic Park. A woven wire fence separates the trail from ALA, Land Bank is responsible for managing the trail.

Pond/Water Supply: There is a pond approximately ½ acre in area, located close to the center of the preserve. Water is supplied from a vertical pipe connected to the pond on the north side equipped with solar water pump system. The pond outlet leads north to a ditch, then east to the property line. Water system will likely require improvement and customization to the new operation.

Noxious and Invasive Weeds: Noxious and priority invasive weeds noted on the property include scattered tansy ragwort (*Senecio jacobea*) and One-seeded hawthorn (*Craetagus monogyna*), which is found throughout the Preserve along fencelines, hedgerows and as annual sapling regrowth in pastures. A patch of slender-flowered thistle (*Carduus tenuiflorus*) approximately fifty yards south of the Rosler Road gate is thought to have been eradicated, but should be monitored. There are also scattered patches of Canada (*Cirsium arvense*) and bull (*Cirsium vulgare*) thistle, and Himalayan blackberry (*Rubus armeniacus*).

Licenses Use Area (LUA): Approximately 10 acres in the southeast portion of the Property is being considered for transfer to the National Historic Park ownership. Should this transaction occur, some or all of this area will be excluded from use by the lessee. Within the LUA there are currently two collaborative projects between Land Bank and Partners, an island marbled butterfly plot and a pasture prairie trial.

Island Marble Butterfly Habitat Plots: Two plots exist and are actively managed by partnering

agencies. Approximately ½ acre of the SW area has been fenced by the San Juan Preservation Trust within the LUA and ¼ acre in the mid-west portion of the ALA. The goal is to promote habitat and food for the Island marble butterfly, the southern plot has been successful several consecutive years. These plots will continue to be managed by Land Bank and partners through the term of this lease.

Pasture Prairie Trial: Approximately ¼ acre in the SE region of the licLUA is a trial aiming to introduce native forb species into existing pasture. The Land Bank and partners will coordinate with Lessee on management within the plot.

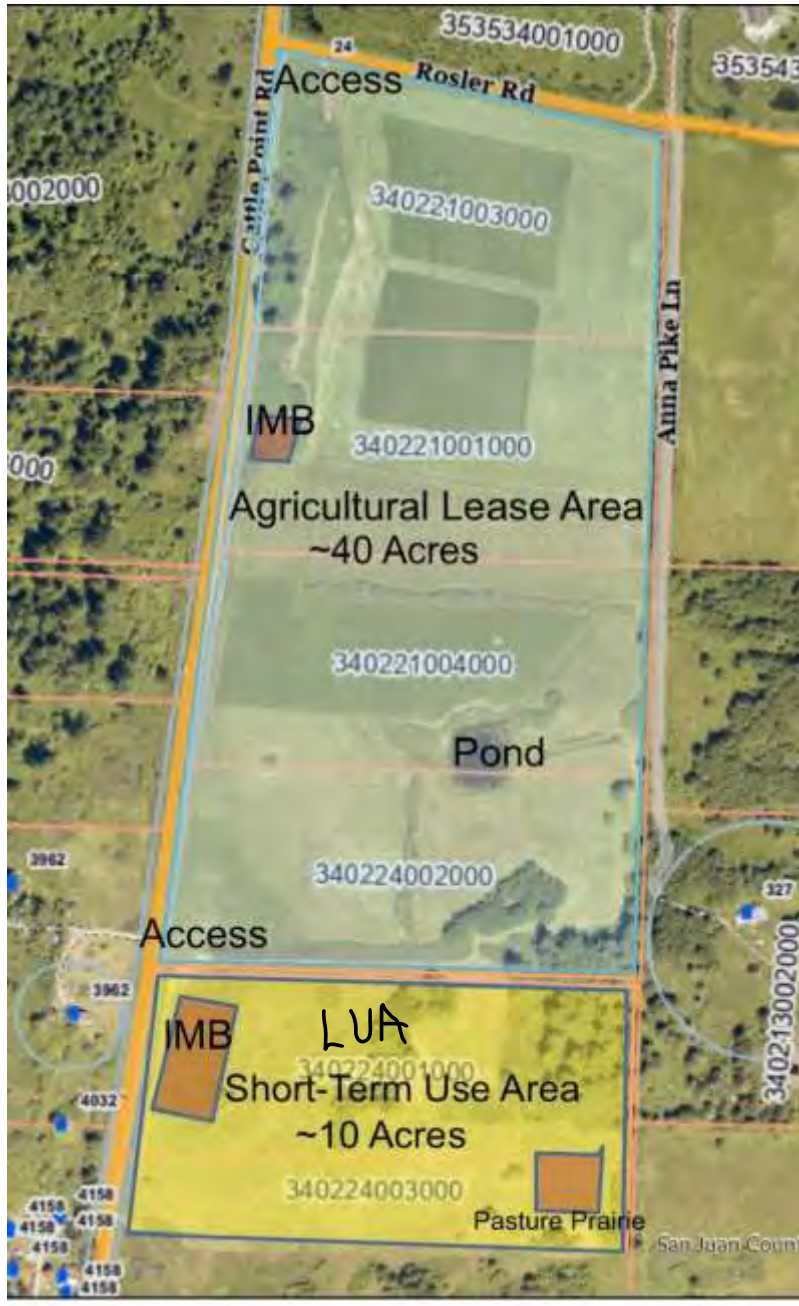


Figure 1. Approximate Lease Area

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ATTACHMENT C FARM PLAN

Our vision for the Frazer Homestead Preserve is to have a sustainable livestock operation on the property which builds soil and ecosystem health, collaborates with Land Bank and other users and neighbors and produces delicious affordable lamb and beef for sale on the San Juan Islands.

Year One:

- Assess fences, water system, gates and access points. Collaborate with Land Bank staff to make any necessary critical improvements. Based on our field tour, we don't anticipate this taking a great deal of time or being too expensive.
- Bring a small group of beef cattle to the property once soil conditions allow. Utilize temporary fencing to make cross fences to allow for pasture rotations. Based on our limited knowledge of the soil conditions and pasture size, we would anticipate bring a group of 8-10 replacement heifers to the property from May through October. The exact timing would be adjusted based on rainfall and soil conditions once we get closer. We would use temporary panels and gates to load and unload livestock.
- Complete soil sampling of all main soil types.
- Assess grazing impacts to obtain information for determining stocking rates for following year. Key factors would be stubble height, bare ground, trampling of sensitive areas.

Year Two:

- Collaborate with Land Bank to apply appropriate soil amendments to pastures. These would be spread out over several years and may be applied more than once per season, depending on the amendment being applied.
- Bring a small group of beef cattle to the property once soil conditions allow. Utilize temporary fencing to make cross fences to allow for pasture rotations. Stocking rate and pasture duration would be based on soil conditions, season, water availability.
- Collaborate with Land Bank staff to extend water lines to other pasture based on cross fencing plan developed during grazing season.
- Collaborate with Land Bank to plan small entrance loading corral for property near gate.

Year Three:

- Collaborate with Land Bank to apply appropriate soil amendments to pastures. These would be spread out over several years and may be applied more than once per season, depending on the amendment being applied.
- Bring a small group of beef cattle to the property once soil conditions allow. Utilize temporary fencing to make cross fences to allow for pasture rotations. Stocking rate and pasture duration would be based on soil conditions, season, water availability.
- Collaborate with Land Bank staff to continue to extend water lines to other pasture based on cross fencing plan developed during grazing season.
- Collaborate with Land Bank staff to consider some permanent cross fencing. Location and type of fence would be based on past two seasons of information.

- Consider bringing a small group of replacement ewes to graze some of the pastures in conjunction with the cattle.
- If funding and all parties are in agreement, construct small loading corral near property entrance.

Year Four:

- Collaborate with Land Bank to apply appropriate soil amendments to pastures. These would be spread out over several years and may be applied more than once per season, depending on the amendment being applied.
- Bring a small group of beef cattle to the property once soil conditions allow. Utilize temporary and permanent fencing to make cross fences to allow for pasture rotations. Stocking rate and pasture duration would be based on soil conditions, season, water availability.
- Collaborate with Land Bank staff to continue to extend water lines to other pasture based on cross fencing plan developed during grazing season.
- Collaborate with Land Bank staff to consider more permanent cross fencing. Location and type of fence would be based on past three seasons of information.
- Consider bringing a small group of replacement ewes to graze some of the pastures in conjunction with the cattle.
- Evaluate the option of a livestock overwintering facility for property. This would consist of a roofed pole structure that would provide limited feed storage, a small feeding area and also function as a compost facility. If soil conditions and funding allow, this could allow for a small group of cattle or sheep to be wintered on a portion of the Frazer Homestead Preserve. Access to winterized water and ideally minimal power would be critical.

Year Five:

- Collaborate with Land Bank to apply appropriate soil amendments to pastures. These would be spread out over several years and may be applied more than once per season, depending on the amendment being applied.
- Bring a small group of beef cattle to the property once soil conditions allow. Utilize temporary and permanent fencing to make cross fences to allow for pasture rotations. Stocking rate and pasture duration would be based on soil conditions, season, water availability.
- Collaborate with Land Bank staff to continue to extend water lines to other pasture based on cross fencing plan developed during grazing season.
- Collaborate with Land Bank staff to consider more permanent cross fencing. Location and type of fence would be based on past four seasons of information.
- Consider bringing a small group of replacement ewes to graze some of the pastures in conjunction with the cattle.
- If funding and all parties are in agreement, construct overwintering facility. Exact design and location to be determined with Land Bank staff and other collaborators such as NRCS and San Juan Conservation District. Consider designing with a compost facility so that manure and bedding can be composted on site and applied to fields when ready.

ATTACHMENT D
ALLOWED IMPROVEMENTS/STRUCTURES

Lessee may make the following improvements following consultation and approval by Land Bank as to design and location:

Interior fencing

Water holding tanks, troughs, and water distribution system on the property.

Portable livestock shelter structures may be utilized and/or shade trees may be planted following approval of species and placement from Land Bank.

Livestock corrals

Multi-use structures near access gates.

Young fir stands may be thinned as needed to create shelter for livestock, or for use on the property e.g. Building, fenceposts, wood chips, biochar.

Land Bank will consider the following improvements:

The addition of a small overwintering facility on the property.

Installing grid power

Drilling a well

Development of farmer housing

AGRICULTURAL LEASE AGREEMENT
BETWEEN THE SAN JUAN COUNTY LAND BANK AND
SAN JUAN ISLAND GRANGE #966

This Lease Agreement is entered into between Lessor San Juan County, acting through the San Juan County Land Bank ("Land Bank") and Lessee ("San Juan Island Grange #966").

WHEREAS, the Land Bank is the owner of a **111-acre** property (PARCELS: **350431001, 350341003, 350232002, 350232003, AND 351121002**) on **ROCHE HARBOR RD** on **SAN JUAN ISLAND**, known as the **BEAVERTON MARSH PRESERVE** ("Property"); and

WHEREAS, the Lessee wishes to lease an approximately forty (40) acre portion of the Property from the Land Bank exclusively for agricultural and educational purposes. The Agricultural Lease Area (ALA) is outlined in the map along with a description of the ALA in attachment B; and

WHEREAS, the Land Bank is willing to allow the permissive use of approximately eight (8) additional acres of pasture under a revocable license, known as the Licensed Use Area (LUA), and is outlined in the map along with a description of the LUA in attachment B; and

NOW, THEREFORE, the parties agree to enter into this agricultural lease on the following terms and conditions:

1. **Leased Property.** The Land Bank agrees to lease the approximately 40-acre ALA of the Property to the Lessee, and the Lessee agrees to lease the approximately 40-acre ALA of the Property from the Land Bank. The 40-acre ALA includes previously hayed and grazed grasslands from boundary at Roche Harbor rd. boundary to southern fence line bordering reed canary grass dominant wetland marsh area and forested areas; and extending east to west inside fenced boundaries. The lease area will be further defined by a new perimeter fence, at which point the total acreage will be reevaluated. The Land Bank's 111 acre Property is legally described in Attachment A, and a map of and description of the approximately 40-acre ALA in Attachment B.)

2. **Term.** The Lease term shall commence in 2024 at the time this Lease is signed by both Land Bank and Lessee and shall terminate on **DECEMBER 31ST 2030** provided that the Lessee shall have the right to renew the lease for three successive additional five-year terms, for a total of 20 years, as long as Lessee has met all of the provisions of the Lease, with the exception that if the Land Bank REET is not fully reauthorized at one percent (1%) by December 31, 2026, the Land Bank may terminate this option to renew at its sole discretion, no later than April 1, 2027. At the end of the initial five-year term a renewal of the Lease shall be in writing, in the form of a deed and recorded by the Land Bank. The Land Bank is not obligated to renew the Lease if the Lessee has been in default regarding any of the terms of the Lease. An updated farm plan shall be appended to the five-year lease renewal. All changes to the plan must be approved by the Land Bank. If, in the sole judgment of the Land Bank, the changes to the farm plan are major, the Land Bank reserves the right not to extend the Lease for a subsequent five-year term.

3. **Rent.** The rental payment shall be \$1,200 per year, payment of which is to be paid to the Land Bank by the first business day of each month and is delinquent if not paid on or before the tenth day of the month. Additionally, Water will be metered and a billed annually at a rate of \$0.002 per gallon (\$2 per 1,000 gallons). Rent shall be paid to the Land Bank at the address stated below or at such other place as the Land Bank designates.

San Juan County Land Bank
350 Court Street, # 6
Friday Harbor, WA 98250

4. **Rent Adjustments.**
The rental payment shall be adjusted at the end of each five-year period during the life of the Lease. The adjustment shall be based on changes to the Seattle -Tacoma – Bellevue Consumer Price Index all items (CPI) as follows:

$$\text{Original Rent} \times \frac{\text{CPI Current Year}}{\text{CPI Starting Year}} = \text{Current Rent}$$

Rent may also be adjusted to reflect the addition of new infrastructure that is paid for by the Land Bank. Adjustments will be negotiated prior to installation of improvements.

Rent may also be adjusted if the Land Bank and Lessee agree on a reduction or increase of ALA acreage.

5. **Late Charges.** If payment of the rent is more than 30-days late, a late fee of 10% of the amount of the monthly rent can be charged for each month that the rent is overdue. Nothing in this paragraph shall prevent the Land Bank from exercising its rights under paragraph 20.

6. **Property "As Is."** The Lessee is leasing the ALA property "as is" in its present condition. The agricultural and other characteristics of the ALA property, its current use and existing improvements, are described in a Present Conditions Report prepared by the Land Bank and acknowledged by the Land Bank and the Lessee to be complete and accurate as of the date of this Lease. The report is attached to this Lease as Attachment B. By signing this Lease, the Lessee acknowledges that they are personally familiar with the condition of the ALA property, and agree to lease said ALA property in its existing condition. The Land Bank will be conducting necessary maintenance, repairs, and improvements on the ALA property during the term of this lease. The Land Bank shall have sole discretion over and control of these activities and will make every effort to coordinate with Lessee to minimize disruptions caused by this work. The following further defines Owner and Lessee responsibilities:

The Land Bank will provide the following:

A. **Soil testing.** Land Bank will collaborate with the Lessee to conduct soil testing approximately every 3 years, including but not limited to standard analysis of organic matter, nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg), sodium (Na), and soil pH (acidity) to monitor soil quality and fertility; and

- B. Fencing repair, maintenance, installation. Land Bank will replace perimeter fencing of the ALA. For interior permanent fencing, Land Bank will supply the fencing materials and Lessee will provide the labor for fence projects agreed upon by both parties; and
- C. Solar water system installation, repairs, and maintenance. Land Bank will install and maintain a metered solar pump in the West well to fill a 2500-gallon storage tank. Lessee will be responsible for water system improvements beyond the initial storage tank; and
- D. Management of all areas outside of the ALA and LUA. Land Bank is responsible for all areas beyond the lease boundaries as indicated on map in attachment B; \
- E. Land Bank Preserve signage. Lessee and Land Bank will collaborate on signage and information at other appropriate locations to guide and inform visitors.
- F. Parking area. Land Bank will improve the western access to accommodate up to 10 vehicles parking spaces and design to accommodate truck and trailer access.
- G. Noxious weeds. Land Bank will take all measures reasonably necessary to control state listed noxious weeds on the Property outside of the ALA.
- H. Livestock Biosecurity. Land Bank and Lessee will collaborate on protocols to the reduce the potential for introduction and spread of livestock disease on the Property.
- I. Partner Collaborations. Land Bank will coordinate with Lessee and partners that are involved in accessing the ALA or LUA to minimize impacts to agricultural operations.

The Land Bank will consider the following:

- A. Soil health. Collaborations on soil amendments and/or other soil or pasture health improvements and practices with Lessee; and
- B. Best Management Practices (BMP's) cost share projects. Financial contributions towards projects agreed upon by both parties.
- C. Additional infrastructure. Financial contributions that support agricultural viability, community engagement and/or education.
- D. Toilet facility. Shared cost of portapotty rental and maintenance as needed or the installation of a permanent composting toilet.

7. **Licensed Use Area (LUA).** The Lessee is granted a revocable license authorizing Lessee to use approximately 8 (eight) acre LUA, for appropriately timed grazing, mowing, and haying during the term of this agreement. Use of the LUA is not part of the lease but is a revocable license. This license is revocable by either party at any time upon 30 days written notice to the other party.

8. **Permitted Uses.** This Lease is solely for agricultural and educational purposes as

described in the Farm Plan of the Lessee which is attached to this Lease as Attachment C. Minor changes to the Farm Plan may be made by written consent of the Land Bank staff. Significant changes must be made through the Lease amendment process. By way of example, adding pastured chickens to the Farm Plan may be done by written consent of staff. Changing the plan to include overwintering livestock must be through formal amendment.

9. **Farming Practices.** Lessee may use the ALA for their farming or other agricultural education activities as provided for in paragraph 7 and for no other purpose, and in so doing shall:

A. **Use agricultural Best Management Practices (BMP's).** Practices will be consistent with a San Juan Islands Conservation District's (SJICD) Individual Stewardship Plan developed for the ALA; and

B. **Farming activities.** Use farmland for activities consistent with the Lessee's proposed Farm Plan as set out in Attachment C; and

C. **Maintain compliance.** Comply with all applicable federal, state and local laws, codes, regulations applicable to the ALA; and

D. **Protect sensitive habitat and resources.** Streams and wetlands on the Property provide valuable water resources, wildlife habitat and agricultural benefits. Such areas shall be protected from nutrient and sediment-laden runoff, soil compaction and other unnecessary disturbance through observance of seasonal, limited duration grazing, appropriately timed haying and other sound agricultural practices. Land Bank may, at its expense, conduct periodic monitoring of vegetation cover and water quality.

E. **Noxious and invasive weeds.** Lessee will take all measures reasonably necessary to control state listed noxious and invasive weeds within the ALA. Control measures will be consistent with the Land Bank's integrated pest management guidance document. Land Bank will collaborate on control within the ALA as needed for species requiring a high level of management.

F. **Maintain soil health.** Maintaining and improving soil health and fertility, while protecting water quality, is a priority for the Land Bank and Lessee. Lessee and Land Bank will collaborate in the development of a soil nutrient management strategy. Land Bank and Lessee may consider a cost share agreement for soil inputs with Land Bank having sole discretion over their investment in inputs. Soil test results will be reviewed at time of renewal to help assess successful stewardship of the soil.

G. **Terraforming and earthwork.** Lessee will consult with the Land Bank and obtain approval prior to any agricultural projects involving earthwork and terraforming. This includes but is not limited to trench, ditch, swale, subsoil, plow, till, berm, and pond construction. In addition, extensive land alterations shall be addressed in the SJICD Individual Stewardship Plan.

H. **Use water responsibly.** Lessee understands the physical and legal limitations of water for agricultural and commercial use on the Farm and will take efforts to conserve the resource and use sustainably. If the operation overburdens the resource either physically or legally, adjustments will be made by Lessee to reach an appropriate use level. Currently the

legal threshold for water usage is based on the the Washington State Department of Ecology Groundwater permit exemption, allowing for up to 5,000 gallons per day for irrigation and stock water as needed. Water will be metered and a billed for annually at a rate of \$0.002 per gallon (\$2 per 1,000 gallons).

I. **Fence Vegetation Management.** While recognizing the pollinator and other benefits provided by native hedgerows, Lessee shall manage woody vegetation along fence lines within the Agricultural Lease Area to reduce damage and encroachment into pastures.

J. **Promotion and Marketing Materials.** Lessee will acknowledge the Land Bank when appropriate at events and in promotional and marketing materials such as Farm tours, educational events, websites, social media, farm store, farmer's market booths, press releases, etc.

K. **Submit annual report.** Lessee will provide an annual report by February 1st of each calendar year including the following: overview of all users and/or sublessees farm activities, stewardship and soil health practices employed.

10. **Environmental Indemnity.** Lessee agrees to indemnify the Land Bank, to the extent provided by law, for any actions, damages, liability or expenses under federal, state or local environmental laws for environmental conditions existing on the Property after the execution date of this Agreement, including but not limited to any claims, damages or losses arising from the improper storage, disposal, transportation or treatment of solid or hazardous waste on or around the Property, including but not limited to fertilizers, pesticides, herbicides, paint and other toxic materials on or around the Property; noise control concerns on or around the Property; and any other violation or alleged or potential violation of a county, state, or federal environmental law.

11. **Expenses.** The Lessee shall pay all expenses incurred in connection with the Lessee's farming activities unless otherwise agreed upon.

12. **Ownership and Disposition of Improvements.** No improvements or structures shall be added to the Property without the written consent of the Land Bank. Approved improvements or structures are listed in Attachment D. Additional improvements or structures shall be approved by an amendment to Attachment D. This written amendment shall be signed by both the Lessee and the County Administrator and include the ownership of the improvement, required insurance coverage, if any, and the agreed disposition of the improvement upon the termination of the Lease. Each such consent shall be executed in the form of a deed and recorded as an amendment to this Lease.

13. **Personal Property.** Any and all personal property in and about the premises belonging to the Lessee or the Lessee's agents or invitees or any person claiming by, through or under the Lessee, shall be at the sole risk of the Lessee. The Land Bank shall in no event be responsible for insuring said personal property, and the Lessee agrees to hold the Land Bank harmless from any claim made by a third party asserting damage to any such personal property.

14. **Inspection.** The Land Bank may, at any reasonable time, enter upon the Property to inspect the same or to perform any work which the Land Bank has the right or the duty to perform. The Land Bank may schedule educational or site tours by the public with ten business

days advance notice to the Lessee.

15. **Free of Liens.** The Lessee will keep the Property free and clear of all liens of any nature whatsoever.

16. **Insurance.** The Lessee shall maintain **GENERAL** comprehensive liability insurance in an amount not less than \$1,000,000, or if greater, to the limit of the policy for combined single-limit bodily injury, including wrongful death, or property damage to defend and indemnify all activities and services covered by this Agreement with a commercial insurance carrier protected under the State of Washington Guaranty Fund or with a risk pool approved by the Insurance Commissioner. Such insurance shall be endorsed to include San Juan County, its officers, elected officials, employees and agents as an additional insured, and shall not be reduced or canceled without thirty (30) days prior written notice to the Land Bank.

Each insurance shall be endorsed to include language containing a “cross liability” or “separation of insureds” indicating essentially that except with respect to the limits of insurance, and any rights or duties specifically assigned in the coverage part to the first named insured, this insurance applies as if each named insured were the only named insured, and separately to each insured against whom a claim is made or a suit is brought. Any payment of a deductible or self-insured retention shall be the sole responsibility of the Lessee.

17. **Indemnification.** The Lessee agrees to indemnify and hold the Land Bank harmless from any claim for damage to person or property made by the Lessee or any of its agents or employees or anyone else claiming by, through or under the Lessee, or by any visitor, invitee or other person.

The parties release each other and their respective authorized representatives from any claims for damage to any person or to the premises and to the fixtures, personal property, Lessee’s improvements and alterations of either the Land Bank or the Lessee in or on the premises that are caused by or result from risk insured under any insurance policies carried by the parties and in force at the time of such damage.

18. **Subleasing and Assignment.** Lessee shall not sublease or assign this Lease or any of their rights thereunder to any other party without the written permission of the Land Bank.

19. **Dispute Resolution.**

A. Any controversy or claim arising out of or relating to this Lease that is not resolved through mediation, shall be resolved by final and binding arbitration pursuant to RCW 7.04A. Demand for arbitration shall be made in writing to the other party. The arbitration shall be held in San Juan County before a single arbitrator selected by the agreement of the parties. If the parties cannot agree upon an arbitrator within fifteen (15) days after the demand for arbitration is made, the arbitrator shall be selected by a judge in the Superior Court of San Juan County in accordance with the procedures set out in RCW 7.04A.110.

B. Unless the parties agree otherwise in writing, the arbitration hearing shall occur no later than sixty (60) days after the date the arbitrator is appointed.

C. The parties agree that, with the exception of the circumstances set out in RCW 7.04A.230, the arbitrator's decision shall be binding, final and not appealable to any court of law.

D. Each party shall pay its own costs of arbitration including attorney's fees. The arbitrator's fee and any administrative expenses imposed by the arbitrator shall be shared equally by the parties.

E. This Lease shall be governed by laws of the state of Washington, both as to interpretation and performance.

20. **Default.** This Lease is subject to Lessee's performance of the duties set out in this Lease. If Lessee defaults in performance of the of the duties, and the breach continues for more than **30** days after Lessee receives written notice of the default, the Land Bank may, at its option:

A. Pursue any legal remedy to recover for the breach, and continue this lease agreement in force; or

B. Declare this Lease agreement forfeited, reenter the Property, and remove all Lessee's property from the Property; or

C. Terminate Lessee's right to possession of the Property.

Upon surrender of the premises, the Lessee shall give up ownership of any crops on the Property at the time of the default.

21. **Condemnation.** If the Property, or any part of the Property, shall be taken by condemnation or eminent domain or sold under threat thereof and the remaining portion is not reasonably suited for the Lessee's use, then this Lease may be terminated by either party as of the date of the taking by notice given by either part to the other within sixty (60) days after the taking. If not terminated the rent shall be equitably adjusted. The date of the taking shall be considered as the date the condemner takes possession of the property.

22. **Nonwaiver.** The failure of either the Land Bank or the Lessee to insist upon strict performance of any covenant or agreement of this Lease shall not be construed as a waiver of such covenant or agreement, each of which shall remain in full force and effect.

23. **Notices:** Any notice required to be sent by either party to the other shall be effective if sent by United States Mail, registered or certified, return receipt requested, postage prepaid and addressed to the Land Bank or the Lessee as follows:

San Juan County
Land Bank
350 Court St. #6
Friday Harbor, WA 98250

San Juan Island Grange #966
PO Box 2013
Friday Harbor, WA 98250

24. **Binding Effect.** This Lease is the entire agreement of the parties and can be modified only by written agreement. The Lease shall be binding upon the Land Bank and the

Lessee, and their respective successors, administrators, executors, heirs and assigns. No modification or alteration to this Lease shall be effective without a written change signed by the party bound thereby. The provisions of this Lease shall be interpreted in accordance with the laws of the state of Washington.

25. **Recordation.** This Lease will be recorded by the Land Bank.

Dated this _____ day of _____, 202_.

(Lessee), Governor

Lincoln Bormann Director

By: _____
Date

By: _____
Date

APPROVED AS TO FORM ONLY
AMY S.VIRA
San Juan County Prosecuting Attorney

REVIEWED BY COUNTY MANAGER
Jessica Hudson
County Manager

By: _____
Date

By: _____
Date

State of Washington)
) ss
County of San Juan)

I certify that I know or have satisfactory evidence that Roger Ellison is the person who appeared before me and said person acknowledged that (he/she) signed this instrument, on oath stated that (he/she) was authorized to execute the instrument and acknowledged it as the President of the San Juan Island Grange #966 to be the free and voluntary act of the said organization for the uses and purposes mentioned in the instrument.

(Signature)

Title

My appointment expires: _____

**ATTACHMENT A
LEGAL DESCRIPTION**

PARCEL B: (Tax Parcel No. 351121003)

The East half of the Northwest quarter of the Northwest quarter, and that portion of the Northeast quarter of the Northwest quarter lying West of the County Road, as conveyed to San Juan County under Auditor's File No. 130698, records of said county, all in Section 11, Township 35 North, Range 3 West, W.M., San Juan County, Washington;

EXCEPT the North 758.34 feet thereof (as measured perpendicular to the North line thereof).

PARCEL C: (Tax Parcel No. 350232002)

The West 608.01 feet (as measured perpendicular to the West line thereof) of that portion of the Southwest quarter of Section 2, Township 35 North, Range 3 West, W.M., San Juan County, Washington, lying South and West of County Road No. 3 as conveyed to San Juan County under Auditor's File No. 130698, records of said county.

PARCEL D: (Tax Parcel No. 350232003)

That portion of the Southwest quarter of Section 2, Township 35 North, Range 3 West, W.M., San Juan County, Washington, lying South and West of County Road No. 3 as conveyed to San Juan County under Auditor's File No. 130698, records of said county;

EXCEPT the West 608.01 feet thereof (as measured perpendicular to the West line thereof).

PARCEL E: (Tax Parcel No. 350341001)

That portion of the East half of the Southeast quarter of Section 3, Township 35 North, Range 3 West, W.M., San Juan County, Washington, lying South of County Road No. 3 as conveyed to San Juan County under Auditor's File No. 130698, records of said county.

PARCEL F: (Tax Parcel No. 350341003)

The East 627.70 feet (as measured perpendicular to the East line thereof) of that portion of the East half of the Southeast quarter of Section 3, Township 35 North, Range 3 West, W.M., San Juan County, Washington, lying South of County Road No. 3 as conveyed to San Juan County under Auditor's File No. 130698, records of said county.

ATTACHMENT B PRESENT CONDITIONS REPORT

Access: The property is accessed by Roche Harbor Rd. The primary entry includes a gated corral and parking area. Land Bank is planning to improve this access and parking area and corral to accommodate increased use. A second gate exists to access the Eastern pastures, though its condition is primitive and limited usability, improvements will be considered as need develops.

Fencing: Perimeter livestock fencing is in poor condition and nonexistent in places. Land Bank is currently replacing perimeter fencing on the Western half of the ALA and will continue to the East to complete the ALA perimeter

Water Supply: Two deep wells exist as on the property available for agricultural use (see map below). Land Bank is installing a solar pump system in the Western well (~14 gpm) to supply 2500 gallon holding tank. Eastern well (~4 gpm) currently has no pump or power. Water systems will need to be customized to the operation by lessee and used at a sustainable rate within legal thresholds. Currently the legal threshold is based on the the Washington State Department of Ecology Groundwater permit exemption, allowing for up to 5,000 gallons per day for irrigation and stock water as needed.

Noxious and Invasive Weeds: Noxious and invasive weeds noted on the property include scattered tansy ragwort (*Senecio jacobea*), One-seeded hawthorn (*Craetagus monogyna*), which is found throughout the Preserve along fence lines, hedgerows and occasional annual sapling regrowth in pastures. There are also scattered patches of Canada (*Cirsium arvense*) and bull (*Cirsium vulgare*) thistle, and Himalayan blackberry (*Rubus armeniacus*), patches oxeye daisy (*Leucanthemum vulgare*) is present in the western pastures.

License Use Areas: Two areas totaling approximately 8 acres are outside of the lease area (see map below). These areas are limited by seasonal wetness, forage quality, and/or buffer requirements. These areas may be used seasonally for appropriately timed flash grazing, haying, mowing, and/or working buffer/habitat plantings. Use of these areas is by way of a revocable license and may be discontinued by the Land Bank at any time with 30 days notice.

Beyond Lease Area: Beaverton Marsh Preserve includes several hundred acres that are not part of the ALA. Such areas include surrounding wetland, marsh, and forest land. Land Bank reserves the right to develop a public trail along Roche Harbor Rd and along the Western property line, fencing replacement and additions may be designed to accommodate a corridor of at least 12' along these boundaries. The Land Bank is responsible for management of areas of the preserve outside of the ALA.

ATTACHMENT C FARM PLAN

FARM PLAN OVERMARSH FARM COMMONS Rev 2 Dated September 10, 2024

INTRODUCTION

The Overmarsh Farm Commons is a cooperatively managed farm, developed to host a variety of farming operations: a community garden, a community participatory agriculture (CPA) operation, market gardens, livestock production, orcharding and grain production. This Farm Plan consists of three elements: Infrastructure; Irrigated annual crops and perennials; Livestock. It will be revised as needed for managing the development at Overmarsh. Revised versions will be attached to the lease at renewal times.

INFRASTRUCTURE

The Land Bank will be funding basic permanent infrastructure to support agricultural viability including perimeter fencing, solar water system to fill storage tanks, and access/parking area. Funding for additional permanent infrastructure will be considered and negotiated between the Land Bank and the Grange. The Grange and the Land Bank will pursue grant funding opportunities to support additional infrastructure needs.

Temporary infrastructure will be paid for and constructed by the Grange. Grange will consult with and get approval from the Land Bank on location, form and details of all infrastructure. We are setting out a very preliminary 5-year plan, realizing that the development of OFC can and will change the order/priority of projects based on the needs of users. Infrastructure projects not laid out here will require new Land Bank approval.

Year 1 (Spring '24 – Spring '25)

Locate and install Porta-potty (G+LB)

Begin perimeter fencing (LB w/G)

Locate / construct hoop house(s) (G)

Develop compost areas – possibly moveable as needed (G)

Design and construct small Livestock loading pen at West Entrance (LB w/G)

Improve vehicle access, pedestrian access, and parking at West Entrance (LB w/G support)

Install water systems:

A) permanent - well up to tank and across parking lot to east (LB w/G)

B) temporary - to livestock/crops (G)

Research the use of a windmill pump to run in parallel to the proposed solar pump system.

Construct small tool/equipment shed(s) as needed (G)

Create temporary livestock shelter(s) with limited heavy/loading use area (G w/users)

Locate berms/swales/pocket ponds as appropriate (G)

Year 2 (Spring '25- Spring '26)

Extend pedestrian access at west entrance based on year 1 experience of adequacy (LB w/G)

Complete/extend perimeter fencing (LB w/G)
Install permanent water system, main line to garden (G)
Expand internal fencing for garden/crop/ trees/orchard areas (G)
Develop and begin implementation of signage plan (G)
Install permanent compost toilet (LB w/G)
Install any needed posts, wires, supports for trees, vines and perennials – ongoing (G)

Year 3 (Spring '26-'27)

Construct covered pavilion/shelter for gatherings, workshops) (LB + G) to collaborate on design/construction
Build usable vehicle entrance and fenced parking at east entrance (LB w/G)
Continue expanding internal fencing and paths for garden/crop areas (G)
Add a second water storage tank, as needed. Possible raised water tank to increase pressure (LB w/G)

Years 4/5 (Spring '27 and beyond)

Install permanent water system, east well storage tank to livestock, as needed (LB w/G)
Build a farm stand, if the need is determined. LB to approve design. (G)
Install east water system, east well to (new?) storage tank (LB w/G) and extend from to livestock/crops (G)
Add other improvements as needed and approved by the Land Bank (G+LB)

IRRIGATED ANNUAL CROPS AND PERENNIALS

In the process of 10 years: Convert approximately 5 acres to annual crops and perennial plantings.

Year 1 (April 2024 - April 2025)

Use occultation to prepare 1/4 acre for fall planting of garlic, winter vegetables and grain. The Grange will conduct a fundraising project of raising potatoes in cages placed upon the tarps to help hold them down.
Once tarps are removed, place them on a nearby location for occultation of at least another 1/4 acre through the winter. The amount of land to be covered will depend on water availability/supply, plus the amount of interest shown by potential users.

Year 2 (April 2025 - 2026)

Convert the original 1/4 acre (#2 above) into a community garden and/or a Grange farmers market garden.
If interested users (commercial growers, a CPA group, and/or expanded community garden gardeners) have stepped forward with a plan incorporating best management practices (BMPs), the land prepared (with occultation during winter months) will be converted into annual crops. Newly removed tarps will be moved to a new location to prepare enough land to accommodate selected users, again, dependent upon water supply.
Begin planning and planting (in collaboration with the Land Bank) a path with a perennial food forest below Roche Harbor Road to act as a windbreak and visual buffer from the road.

Year 3 and beyond (April 2026 and on)

Depending upon water supply and interest, continue the cycle of occultation, user selection, and application/monitoring of BMPs in annual and perennial crops until it is deemed that maximum land usage is in place.

Once maximum usage is achieved, collaborate with the Ag Guild to expand this model to other locations.

LIVESTOCK

No livestock will be introduced until a biosecurity protocol has been adopted.

The grazing area will expand as perimeter fencing is installed

1. Season: Sheep and/or cattle pastured spring – fall, dependent on the availability of forage and condition of the soil (wetness).
2. Stocking rate: Initially 30 Animal Unit Months to be adjusted as we learn the capacity of the land.
3. Rotation – Livestock will be rotated throughout the grasslands using temporary electric fencing and will be moved to leave at least 3” of stubble height of forage to support healthy regrowth. Livestock shall not be allowed to create exposed soil due to overgrazing.
4. Wetland pastures approved for grazing will be flash grazed as conditions allow between June 1 and October 1.
5. Mowing – Grazed and ungrazed areas will be mowed/hayed as needed.
6. Livestock will be kept out of wetland and riparian areas outside of the ALA, except for grazing trials arranged jointly between the Land Bank and the Grange.
7. Stock water will be transferred from wells to storage tank(s) and then to stock troughs.
8. All livestock, equipment, and temporary infrastructure will be removed by November of each year.

ATTACHMENT D
ALLOWED IMPROVEMENTS/STRUCTURES

The following improvements and structures have preliminary conceptual approval by the Land Bank. Lessee must obtain formal written approval from the Land Bank prior to the commencement of any such work. Lessee will submit a written proposal including the proposed purpose, design specifics, location, timeline, and financial responsibilities.

Interior livestock and wildlife fencing

Livestock corrals and loading areas

Water holding tanks and water distribution systems from East and West wells.

Portable livestock shelter structures may be utilized and/or shade trees may be planted following approval of species and placement.

Greenhouses, high tunnels, and hoop houses

Portapotty or composting toilet

Tool/equipment/storage/processing sheds or barns

Pump houses

Improved access and parking

Farm access roads, trails, and paths

Farmstand

Multiuse structure

Installing grid power

Earthwork and terraforming

Perennial plantings



CRITICAL AREAS ASSESSMENT & MITIGATION PLAN **(WETLAND DELINEATION & FWHCA ASSESSMENT)**

BAILER HILL / DOUGLAS ROAD
ROAD IMPROVEMENTS PROJECT
SAN JUAN ISLAND, WA

JULY 2024

NW ECOLOGICAL SERVICES
2801 Meridian St, Suite 202, Bellingham, WA 98225
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EXECUTIVE SUMMARY

Northwest Ecological Services, LLC (NES) was retained to complete a critical areas assessment for 1.3 miles of County owned Right-of-Way (ROW) along Douglas Road and Bailer Hill Road, and the entirety of parcel #352814001000, located north of Bailer Hill Road, on San Juan Island, in San Juan County, Washington. The assessment performed by NES included identification of any wetlands, fish and wildlife habitat conservation areas, frequently flooded areas, and/or shorelines as observed within the review area. It did not include identification of the following critical areas: geologically hazardous areas or critical aquifer recharge areas.

All information contained in this report is based on available information and site conditions at the time of the site visit(s). This report is intended for inclusion with future wetland, stream, and wildlife habitat permit applications to San Juan County (County), Washington State Department of Ecology (Ecology), Washington State Department of Fish and Wildlife (WDFW), and the U.S. Army Corps of Engineers (Corps), as may be required.

Collin Van Slyke (Professional Wetland Scientist [PWS] #3129) and Candice Trusty (Wetland Professional in Training [WPIT]), NES ecologists, conducted site visits on December 19th and 20th of 2023 to document site conditions. NES identified six wetlands, Wetlands A, B, C, D, E, and OS-1, within the review area. Wetland A is a Category II wetland. Wetlands B, C, and OS-1 are Category III wetlands. Wetlands D and E are Category IV wetlands.

San Juan Valley Creek confluences with False Bay Creek within the subject parcel. Both streams are identified as Type F streams. However, both streams are documented to dry intermittently throughout the summer and lack conditions suitable for salmonid use.

NES did not observe any state or federally Threatened, Endangered, or Candidate species or state Priority species within the review area or vicinity. State Priority Habitat observed within the review area includes herbaceous balds and the identified wetlands and streams.

Four excavated agricultural ponds were observed within the review area. These areas are not anticipated to be regulated by the County as FWHCAs, as they do not appear naturally occurring. No other ponds, or lakes, were observed within the review area.

The review area is outside of the FEMA mapped special flood hazard area (SFHA). However, flooding is known to occur along Bailer Hill Road, adjacent to False Bay Creek.

No shorelines are mapped within the review area or immediate vicinity. The review area appears to be outside of SMP jurisdiction.

The identified wetlands and streams are expected to be regulated by one or more of the following agencies: San Juan County, Ecology, the Corps, and/or WDFW. San Juan County requires protective buffers around regulated critical areas including habitat buffers, water quality buffers, and/or tree protection zones.

The proposed project consists of improvements to a 1.3 mile stretch between Douglas Road MP 3.15 and Bailer Hill Road MP 4.45. Bailer Hill Road will be realigned to be centered within the Right-of-Way and sections will be elevated to remain above periodic flood events. Additionally, the roads will be widened to include 4-ft paved shoulders and 4-ft vegetated filter strips on both

sides of the road to treat stormwater runoff. No modifications to the culvert containing False Bay Creek will be made. However, the existing rockery extending east and west from the culvert will be replaced with a better engineered rockery capable of supporting the wider road shoulders and vegetated filter strip.

The proposed project will have unavoidable impacts to roadside wetlands and buffer areas. A total of 0.147 ac of permanent wetland impacts and 0.181 ac of permanent buffer impacts are proposed. Indirect wetland impacts will be avoided through installation of the stormwater filter strips along the road. All areas of temporary wetland disturbance (0.002 ac) and buffer disturbance (0.008 ac) will be revegetated with native species.

To compensate for the permanent wetland and buffer impacts, a total of 1.468 ac of wetland enhancement is proposed. The proposed mitigation will be located on the adjoining San Juan County Land Bank property (parcel #352814001000). Enhancement will be in the form of planting native trees and shrubs within the site wetland associated with the on-site streams and will expand upon pre-existing restoration plantings along the creeks. Existing livestock exclusion fencing will be relocated to encompass the proposed mitigation areas.

The installed vegetation will be monitored and maintained for a minimum of five years. A conservation easement currently exists on the mitigation parcel and will provide protection and preservation in perpetuity.

NES QUALIFICATIONS

NES is a specialized service-oriented environmental consulting firm based in Bellingham, Washington. We provide a range of biological services to both the public and private sectors. Our services include wetland assessments, biological assessments, wetland restoration and mitigation plans, natural resource analysis, environmental regulatory compliance, landscape and ecological design, and environmental impact assessment of plants, animals, fish, and sensitive habitats. NES professionals have performed wetland and biological assessments over 36,500 acres [1991-2023] in Whatcom, Skagit, Island, and San Juan counties.

NES staff qualifications summary:

- Molly Porter is an ecologist with NES and has provided environmental services within the north Puget Sound area since 2004. Ms. Porter obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at Western Washington University (WWU). She is certified through SWS as a PWS, #2064.
- Collin Van Slyke is an ecologist with NES, providing environmental services for projects throughout north Puget Sound since 2014. Mr. Van Slyke obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at WWU. He is certified through SWS as a PWS, #3129.
- Candice Trusty is an ecologist with NES, providing environmental services within the north Puget Sound since 2019. Ms. Trusty obtained a Bachelor of Science in Environmental Science from Huxley College of the Environment at WWU. She is certified through SWS as a WPIT.
- Michael Whitehurst is an ecologist with NES. Mr. Whitehurst obtained a Bachelor of Science in Marine Biology from the University of West Florida and a certificate in wetland science and management from the University of Washington. His experience includes marine and freshwater organism identification, marine and terrestrial botany, and water quality sampling and analysis.
- Ellie Aosved is an ecologist with NES. Ms. Aosved obtained a Bachelor of Arts in Biology from Pacific Lutheran University. Her experience includes marine and freshwater organism identification, marine and terrestrial botany, and wetland monitoring for state agencies.
- Meg Harrison is an ecologist with NES. Ms. Harrison obtained her Bachelor of Science in Environmental Science from Montana State University with an emphasis in Soil Science. Ms. Harrison has over 5 years of experience in environmental consulting for the federal government and private firms as a staff scientist and wildlife biologist. Meg has completed the USACE Wetland 40-hr Delineation course and is certified through SWS as a WPIT.

DISCLAIMER

Wetland, stream, and lake delineations and determinations are based upon protocols defined in manuals and publications produced by federal, state, and local agencies. The wetland methodology used in this report is consistent with methods described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Corps, 2010) and the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987), as required by WAC 173-22-035.

Mitigation plans are developed to meet local regulations. This plan requires local agency concurrence prior to implementation. The recommendations are based on conditions at the time of the site visit(s) and development plans provided by the Client and Client representatives. Although the plan is carefully designed to facilitate success, no guarantees are given that the project will meet all performance standards. Project success depends on many unforeseen and uncontrollable events, achieving success can be greatly improved through:

- Ensuring a qualified ecologist is on site during mitigation project construction
- Installing the mitigation project as specified in this report
- Maintaining the mitigation project as specified in this report (ideally by a landscape professional that specializes in restoration and/or wetland mitigation)
- Implementing any recommended contingency measures in a timely manner

Findings within this report are based on observations of conditions at the time of the stated site visit(s). This report is provided for the use of the named recipient only and is not intended for use by other parties for any other purpose. This report does not guarantee agency concurrence or permit approval.

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1.0 INTRODUCTION

1.1 Scope of Work

Northwest Ecological Services, LLC (NES) was retained to complete a critical areas assessment and mitigation plan for a roadway improvement project on San Juan Island, in San Juan County, Washington. The assessment performed by NES included identification of any wetlands, fish and wildlife habitat conservation areas, frequently flooded areas, and/or shorelines as observed within the review area. It did not include identification of the following critical areas: geologically hazardous areas or critical aquifer recharge areas. This report analyzes proposed impacts and presents mitigating actions based on the current project design.

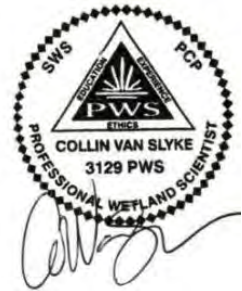
All information contained in this report is based on available information and site conditions at the time of the site visit(s). This report is intended for inclusion with future wetland, stream, and wildlife habitat permit applications to San Juan County (County), Washington State Department of Ecology (Ecology), Washington State Department of Fish and Wildlife (WDFW), and the U.S. Army Corps of Engineers (Corps), as may be required.

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1.2 Review Area

The review area is located on San Juan Island, in unincorporated San Juan County, Washington (Sections 27 & 28, Township 35N, Range 03W) (Figure 1- all referenced figures are located in Appendix B). The review area includes 1.3 miles of County-owned Right-of-Way (ROW) between Douglas Road at mile post (MP) 3.15 to Bailer Hill Road MP 4.45 and the entirety of parcel #352814001000 (40-acres), located north of Bailer Hill Road. Areas within 300 feet of the ROW and subject parcel, were reviewed remotely on a reconnaissance level, as required by San Juan County Code (SJCC) [18.35.100]. An aerial photograph of the review area and surrounding landscape is included as Figure 2.

1.3 Project Overview

The proposed project consists of improvements to a 1.3 mile stretch between Douglas Road MP 3.15 and Bailer Hill Road MP 4.45 and includes the following elements:

- Road Improvements. Bailer Hill Road will be realigned to be centered within the 60-ft Right-of-Way (ROW) and sections will be elevated to remain above periodic flood events. The Douglas and Bailer Hill roadways be widened to include 4-ft paved shoulders 4-ft vegetated filter strips on both sides of the road to treat stormwater runoff. Figure 14 is an example of a typical road cross section of the current and proposed roadway.

No modifications to the culvert containing False Bay Creek will be made. However, the existing rockery extending east and west from the culvert will be replaced with a better engineered rockery capable of supporting the wider road shoulders and vegetated filter strip (Figure 15).

- Critical Area Impacts. The proposed project will have unavoidable impacts to roadside wetlands and buffer area (Figures 16-18). Indirect wetland impacts will be avoided through installation of the stormwater filter strips along the road.
 - Permanent Wetland Impacts: A total of 0.147 ac of permanent wetland impacts are proposed, including 0.027 ac of impact in Wetland A (Category II) and 0.120 ac of impact in Wetland B (Category III).
 - Permanent Buffer Impacts: A total of 0.181 ac of permanent buffer impacts are proposed.
 - Temporary Impacts. Temporary disturbance to 0.002 ac of wetland and 0.008 ac buffer parallel to the road project will result during construction. Areas of temporary wetland/buffer disturbance will be revegetated after construction is complete.
 - Stream Impacts. No modifications to the culvert containing False Bay Creek will be made.
- Compensatory Mitigation. To compensate for the permanent wetland and buffer impacts, a total of 1.468 ac of wetland enhancement is proposed. The proposed mitigation will be located within adjoining the San Juan County Land Bank property (parcel #352814001000) (Figure 18). Enhancement will be in the form of planting native trees and shrubs within the site wetland associated with the on-site streams and will expand upon pre-existing restoration plantings along the ditched creeks. Existing livestock exclusion fencing will be relocated to encompass the proposed mitigation areas.

The installed vegetation will be monitored and maintained for a minimum of five years. A Conservation Easement currently exists on the subject parcel (Appendix F) and protects the mitigation site in perpetuity.

2.0 ASSESSMENT METHODS

The critical areas assessment included an office review of existing publicly available natural resource data followed by a site visit(s). NES then completed a functional assessment for any identified critical areas. NES conducted the site investigation and assessments in accordance with methodology specific to each resource area (wetlands, fish and wildlife habitats, frequently flooded areas, and shorelines), as described below.

2.1 Document Review

NES reviewed publicly available maps and applicable reports pertaining to the project area. Specifically, NES reviewed existing documents related to soils, hydrology, vegetation, wetlands, fish and wildlife habitats, shorelines, and frequently flooded areas.

2.2 Field Methods

2.2.1 Wetlands

The wetland delineation was conducted in accordance with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Corps, 2010) and the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987). To make a positive wetland determination, this methodology requires evidence that at least one positive wetland indicator be found for each of three parameters (vegetation, soils, and hydrology). An area is not considered a regulatory wetland if the area lacks indicators for any one of these three parameters under normal environmental conditions. Upland/wetland boundaries are delineated by locating the transition where soils, vegetation, or hydrology no longer indicate that wetland parameters are met.

2.2.2 Streams and Lakes

If streams or lakes were identified on the property, NES marked the ordinary high-water mark (OHWM) consistent with state law as defined in RCW 90.58.030. NES used field indicators to determine the OHWM based on the methodology contained in *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (Anderson et al., 2016), Ecology Publication #16-06-029. During the site visit, the investigating ecologists also completed a stream characterization of basic stream attributes including average depth, vegetation, substrate, and habitat features. If lakes were present, NES documented basic lake attributes including size, surrounding vegetation, and hydrologic connectivity.

2.2.3 Fish and Wildlife

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

2.2.4 Shorelines

NES reviewed the local shoreline management program (SMP) text and maps to determine the potential presence of a regulated shoreline within the review area. During the site visit, NES field verified the presence of any shoreline and determined the extent of SMP jurisdiction based on SMP mapping, OHWM, floodways, wetlands, and floodplains. If shorelines were present, NES determined the OHWM consistent with state law as defined in RCW 90.58.030 and described under Section 2.2.2.

2.2.5 Frequently Flooded Areas

NES reviewed Federal Emergency Management Agency (FEMA) mapping to determine if frequently flooded areas are documented on site.

2.2.6 Mapping

During the site visits, NES staff flagged the identified critical areas with pink flagging and recorded their locations using a GPS/GNSS unit with reported sub-meter accuracy and 95% precision. The GPS waypoints were input to geographic information systems (GIS) mapping software to produce Figures 3-7. Features shown in Figures 3-7 have not yet been surveyed and are approximate.

To evaluate the wetlands using the Ecology Wetland Rating System for Western Washington (Hruby and Yahnke, 2023), NES estimated the off-site extent of wetlands which extend outside of accessible areas within the review area. The delineated on-site and estimated off-site extent of the wetlands are depicted in the wetland rating form attachments included in Appendix E.

Off-site features were mapped at a reconnaissance level using publicly available resources including previous wetland mapping, interpretation of aerial imagery and digital elevation modeling (DEM) (i.e. LiDAR), and remote observations made from the review area.

3.0 FINDINGS

Collin Van Slyke (Professional Wetland Scientist [PWS] #3129) and Candice Trusty (Wetland Professional in Training [WPIT]), NES ecologists, conducted site visits on December 19th and 20th of 2023 to document site conditions. A follow up site visit with the Corps was conducted on March 19th of 2024 to review the delineation later in the wet and growing season. The following is based on observations from the site visits and information gathered during the document review. Photographs taken during the site visits are included in Appendix C.

3.1 Landscape Setting, Watershed, and Review Area Overview

3.1.1 Document Review

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

- **Aerial Photograph: Google Earth, 2022 (Figure 2)**

Land uses adjacent to the road ROW and the surrounding landscape include low-density residential development, pasture, and hay/silage fields. Residential driveways and the following additional roadways are within the review area: False Bay Drive and Little Road.

The subject parcel appears to be mostly pasture grazed by cattle. False Bay Creek flows south through the western portion of the site and San Juan Valley Creek flows from the northeast corner of the site into False Bay Creek, near the center of the site. A narrow strip of woody vegetation appears to buffer the majority of the on-site streams.

- **United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) Soil Survey of San Juan County, Washington (USDA, NRCS, 2024) (Figures 8 and 9)**

The NRCS soil survey maps eight soil types within the review area: Coveland loam, 0 to 5 percent slopes (Map Unit #1001); Shalcar muck, 0 to 2 percent slopes (1005); Coveland-Mitchellbay complex, 2 to 15 percent slopes (1009); Mitchellbay gravelly sandy loam, 5 to 15 percent slopes (2001); Mitchellbay gravelly sandy loam, 0 to 5 percent slopes (2004); Pilepoint loam, 2 to 8 percent slopes (3000); Roche-Haro-Rock Outcrop, 5 to 25 percent slopes (4005); and Haro-Hiddenridge-Rock Outcrop, 5 to 30 percent slopes (5007).

Coveland loams are somewhat poorly drained, hydric soils in hydrologic soil group C/D. This soil is typically found in valleys and on hillslopes and is composed of glacial drift over dense glaciomarine deposits. The depth to the water table is about 0 to 8 inches.

Shalcar muck is a very poorly drained, hydric soil in hydrologic soil group B/D. This soil is typically found in depressions and is composed of highly decomposed plant material over glacial outwash or dense glaciomarine deposits. The depth to the water table is about 0 to 8 inches.

Mitchellbay gravelly sandy loam is a somewhat poorly drained, non-hydric soil in hydrologic soil group C/D. This soil is typically found in valleys and on valley sides and

is composed of glacial drift over dense glaciomarine deposits. The depth to the water table is about 4 to 12 inches.

Pilepoint loams are moderately well drained, non-hydric soils in hydrologic soil group C/D. This soil is typically found on hillslopes and is composed of eolian sands over glacial outwash and dense glaciomarine deposits. The depth to the water table is about 12 to 20 inches.

Roche soils are a moderately well drained, non-hydric soil in hydrologic soil group C/D. This soil is typically found on hillslopes and is composed of glacial drift over dense glaciomarine deposits. The depth to the water table is about 12 to 20 inches.

Haro soils are well drained, non-hydric soils in hydrologic soil group D. This soil is typically found on hillslopes and mountain slopes and is composed of glacial drift mixed with colluvium from metasedimentary bedrock. The depth to the water table is more than 80 inches.

- **Ecology Water Quality Atlas (Ecology, 2024)**

The review area is located in Water Resource Inventory Area 2 (WRIA 2) – San Juan, and the San Juan Island subbasin (12-digit HUC).

3.1.2 Field Observations

The review area is within San Juan Valley, which drains south to False Bay. False Bay Creek flows south through the western portion of the review area, within the subject parcel. Consistent with the aerial photos, the review area adjacent to the roadside ROW is mostly low-density residential development and associated lawn areas, and pasture. Shallow ditches exist along the majority of the roadside ROW. However, the southern ditches along Bailer Hill Road near False Bay Creek are significantly deeper, approximately 10 feet.

The subject parcel is owned by the San Juan County Land Bank. Aside from the stream riparian areas, the remainder of the site is pasture. The entire parcel appears to be used for grazing cattle, although cattle were not present during the site assessment. Cow exclusion fencing is present along the riparian zone of the on-site streams. A cattle path exists across each stream, providing access to all portions of the site. A cattle trough is present near the center of the site.

The review area contains wetlands, streams, and uplands as described below.

3.2 Wetlands

NES identified six wetlands, Wetlands A, B, C, D, E, and OS-1, within the review area.

3.2.1 Document Review

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

- **San Juan County Polaris- Possible Wetlands Map (San Juan County, 2024) (Figure 10)**
Possible wetlands are mapped by the County within the review area and vicinity. Several of these were found to be ponds during the site investigation.

- **U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Wetlands Mapper (USFWS, 2024)**
NWI maps multiple palustrine emergent (PEM) wetlands and a palustrine unconsolidated bottom (PUB) pond within the review area. False Bay Creek and San Juan Valley Creek are mapped as palustrine scrub-shrub (PSS) wetlands.
- **WDFW Priority Habitats and Species (PHS) Data on the Web Interactive Mapping (WDFW, 2024a) (Figure 11)**
WDFW wetland mapping is consistent with NWI, except WDFW also maps wetlands associated with False Bay Creek south of Bailer Hill Road.

3.2.2 Field Observations

NES identified six wetlands, Wetlands A, B, C, D, E, and OS-1, within the review area (Figures 3-7). Wetland boundaries were only delineated within the ROW and subject parcel. Wetland OS-1 does not extend into the ROW but is located within 300 feet. The approximate location of the delineated wetlands and estimated extent of the off-site wetlands is shown in Figures 3-7. NES documented wetland conditions at Sample Plots (SP) 1, 2, 4, 5, 7, 10, 12, and 15 (Figures 3-7). Data sheets from the delineations are included in Appendix D of this report. The identified wetlands are summarized in Table 1 and are described below.

Table 1. Wetland Classification Summary

Wetland	Hydrogeomorphic Class	Cowardin Classification	Approximate Size (acres)*
A	Depressional/Riverine/Slope	PSS/PEM	68.3
B	Depressional/Slope	PEM/PUB	7.67
C	Depressional	PSS/PEM	0.004 (181 sq. ft.)
D	Slope	PEM	0.20 (8,652 sq. ft.)
E	Slope	PEM	0.10 (4,411 sq. ft.)
OS-1	Depressional	PEM	0.16 (6,892 sq. ft.)

(PSS: Palustrine Scrub-shrub; PEM: Palustrine Emergent; PUB: Palustrine Unconsolidated Bottom)

*Total area is estimated and includes the off-site extent.

Wetland A

Wetland A is a large palustrine emergent/scrub-shrub (PEM/PSS) wetland located across the majority of the subject parcel and extending off-site to the north. The wetland system is associated with False Bay Creek and San Juan Valley Creek. Wetland A has depressional, riverine, and slope hydrogeomorphic (HGM) components.

The majority of Wetland A is vegetated with pasture grasses. Vegetation observed within the on-site wetland pasture includes reed canarygrass (*Phalaris arundinacea*), tall fescue (*Schedonorus arundinaceus*), bentgrass (*Agrostis sp.*), red fescue (*Festuca rubra*), soft rush (*Juncus effusus*), and creeping buttercup (*Ranunculus repens*). On-site portions of the wetland adjacent to the streams are vegetated with a scrub-shrub plant community. Vegetation along the stream is dominated

by Pacific willow (*Salix lasiandra*), hardhack (*Spiraea douglasii*), and an understory of reed canarygrass. Additional vegetation observed includes Sitka willow (*Salix sitchensis*), Nootka rose (*Rosa nutkana*), and black twinberry (*Lonicera involucrata*).

Soils were documented within Wetland A at SP 5, 7, and 15. Soils within Wetland A are generally composed of silt loam topsoil and clay/clay loam subsoil. Documented soils met NRCS hydric soil indicators Depleted Below Dark Surface (A11) or Loamy Gleyed Matrix (F2).

During the site assessment, areas of shallow seasonal ponding (approximately 6 inches) were observed in the wetland pasture and flooded areas adjacent to False Bay creek had approximately 14 inches of surface water. The remainder of the on-site wetland had saturated soils and high groundwater in the upper 12 inches of the soil profile. Wetland A appears to receive hydrology from overbank flooding from the streams, seasonally high and/or perched groundwater, surface runoff, and direct precipitation. Surface water outlets Wetland A at the southern extent via False Bay Creek through a culvert under Bailer Hill Road. Portions of Wetland A in the northeastern part of the parcel appear to have been drained and no longer meet wetland hydrology criteria, though hydric soils persist (see Section 3.3 for further detail). Drains are evident in LiDAR, but none were located on site.

Wetland B

Wetland B is a large PEM wetland located in a hayfield and contains two excavated ponds (palustrine unconsolidated bottom [PUB]). Wetland B has both slope and depressional HGM components. The wetland is situated on an approximately 3 percent gradient sloping down from Bailer Hill Road to the north. The wetland is located along the ROW of Bailer Hill Road, on either side of the road, is connected by a culvert under the road, and extends off-site to the north.

The majority of Wetland B is located outside of the review area and appears to be dominated by pasture grasses including reed canarygrass, red fescue, and velvet grass (*Holcus lanatus*). A small scrub-shrub vegetation component exists within Wetland B adjacent to the road, though it is not large enough to be considered second Cowardin vegetation class. Vegetation observed in this area includes English hawthorn (*Crataegus monogyna*), black hawthorn (*Crataegus douglasii*), Nootka rose, hardhack, red osier dogwood (*Cornus sericea*), Himalayan blackberry (*Rubus armeniacus*), slough sedge (*Carex obnupta*), reed canarygrass, and stinging nettle (*Urtica dioica*).

Wetland soils were documented in Wetland B at SP 2 and 4. Documented soils are composed of loam topsoil and loamy sand subsoil and met NRCS hydric soil indicators A11, Thick Dark Surface (A12), and Depleted Matrix (F3).

Shallow seasonal ponding was observed in Wetland B within the roadside ditch. Based on aeriels, additional seasonal ponding within Wetland B occurs further down gradient outside of the review area. The excavated ponds contain permanent surface water ponding. Soil saturation and groundwater were observed in the upper part of the soil profile within Wetland B along Bailer Hill Road. Sources of hydrology to Wetland B appear to be seasonally high and/or perched groundwater, surface runoff, and direct precipitation.

Wetland C

Wetland C is a very small (181 sq. ft.) PEM/PSS, depressional wetland located between Douglas Road and a private driveway at the north end of the review area. The wetland is dominated by reed canarygrass and hardhack. A small amount of Himalayan blackberry was also observed within the wetland.

Soils were documented in Wetland C at SP 1. Soils are composed of loam topsoil and silt loam subsoil. Soils documented at SP 1 do not technically meet NRCS hydric soil indicators. However, the soils appeared disturbed and the soil profile mixed. Portions of the soil profile were depleted and contained prominent redox concentrations. Within the wetland, groundwater was observed at the soil surface and the area was determined to be wetland based on strong hydrologic and vegetative indicators.

Wetland C appears to receive stormwater input Douglas Road, direct precipitation, and potentially seasonally high and/or perched groundwater. Water in Wetland C was observed flowing into a culvert at the north end of the wetland, which conveys water northwest, likely eventually draining to San Juan Valley Creek.

Wetlands D and E

Wetlands D and E are PEM, slope wetlands located within the southern ROW of Bailer Hill Road and extending south into pasture. These wetlands are dominated by pasture grass including bentgrass, red fescue, tall fescue, and reed canarygrass. The wetlands contain a narrow fringe of scrub-shrub vegetation along the road, including English hawthorn, black hawthorn, Nootka rose, and snowberry (*Symphoricarpos albus*). However the shrubby areas are not large enough to be considered a second Cowardin vegetation class.

Soils were documented in Wetlands D and E at SP 10 and 12, respectively. Soils within Wetland D are composed of silt loam topsoil and clay subsoil and met hydric soil indicator A11. Soils within Wetland E are composed of gravelly loam topsoil and clay loam subsoil and met hydric soil indicator A12.

During the assessment, soils within Wetlands D and E were saturated and groundwater was observed within the upper part. The wetlands are situated on an approximately 2-3 percent gradient slope and have very little ponding. Wetland D has some seasonal ponding within the roadside ditch. Sources of hydrology likely include surface water runoff, seasonally high and/or perched groundwater, and direct precipitation. Wetland D slopes down to the roadside ditch, which flows east and outlets to False Bay Creek. Wetland E slopes down to the west, to the creek.

Wetland OS-1

Wetland OS-1 is just outside of the southern ROW of Bailer Hill Road. The wetland appears to have been historically excavated and an earthen and quarry spall berm separates the wetland from the roadside ditch. Wetland OS-1 is a PEM depressional wetland dominated by reed canarygrass. Willow saplings, hardhack, and Nootka rose vegetate the berm and along the fringe of the wetland.

During the site assessment, Wetland OS-1 had approximately 20 inches of ponding. The majority of the wetland appears seasonally ponded and likely contains a narrow fringe of seasonally saturated soils. A pipe was observed just upgradient of the wetland that appears to discharge stormwater to the wetland. Additional sources of hydrology likely include surface water runoff, direct precipitation, and potentially seasonally high and/or perched groundwater. No surface water outlet was observed from Wetland OS-1.

Soils were not documented within Wetland OS-1, as the wetland is located just outside of the ROW.

3.2.3 2014 Wetland Categorization and Functional Assessment

NES categorized the identified wetlands using the Ecology Wetland Rating System for Western Washington: 2014 Update (Rating System) Version 2 (Hruby and Yahnke, 2023) and the associated wetland rating forms, Version 2 (July 2023).

The Washington State Wetland Rating System categorizes wetlands based on specific attributes based on rarity, sensitivity to disturbance, and the functions they provide. This methodology identifies and quantifies the potential of various functions operating within a wetland. This determination is based on the physical characteristics of water quality, hydrologic, and habitat functions in the wetland and its buffers. Using this system, wetlands are given a score based on the functions provided by the wetland and are classified as Category I (highest) through Category IV (lowest). A Category I rating is assigned to wetlands that have the highest value, opportunity, and potential to provide functions, and are most difficult to replace.

The Rating System scores wetland function for three categories: water quality, hydrology, and habitat. Each functional category is rated for site potential, landscape potential, and value. Rating scores are given as either "High," "Medium," and "Low."

Wetlands that rate "high" for water quality site potential typically have physical features that give the wetland the potential to provide water quality treatment. Wetlands that rate "high" for water quality landscape potential typically are in a position in the landscape that may receive potentially polluted runoff and therefore the wetlands have the opportunity to provide treatment. Wetlands that rate "high" for water quality value are typically valuable to society because they improve water quality in a basin with documented water quality impairment.

Wetlands that rate "high" for hydrologic site potential typically have physical characteristics that enable the wetland to reduce flooding and erosion by providing water storage. Wetlands that rate "high" for hydrologic landscape potential typically are in a setting where the wetlands receive runoff from developed or partially developed areas. Wetlands that rate "high" hydrologic value are typically valuable to society because they provide functions in a basin where flooding occurs.

Wetlands that rate "high" for wildlife habitat site potential typically have the physical features that provide breeding habitat, cover, and/or foraging habitat for a variety of species. Wetlands that rate "high" for habitat landscape potential are typically in a landscape position where little habitat fragmentation or loss has occurred, and the wetland has the opportunity to provide wildlife habitat as multiple species may be present. Wetlands that rate "high" for habitat value

typically provide value to society because the wetlands are adjacent to habitats or species that are protected by local, state, or federal regulations.

Functions with a “medium” rating provide the above functions to a lesser degree. Functions with a “low” rating are typically in wetlands that are degraded, are not supported by the surrounding landscape, or do not provide functions that are of value to society.

The Ecology Rating Forms for the identified wetland(s) are included at the end of this report in Appendix E. A summary of 2014 Ecology rating and scores are shown in Table 2.

Table 2. 2014 Wetland Functional Assessment

Wetland	Improving Water Quality	Hydrologic	Habitat	Total Score	Ecology Category
A	M/M/H (7)	L/M/H (6)	M/H/M (7)	20	II
B	L/M/H (6)	M/M/H (7)	L/M/M (5)	18	III
C	M/H/H (8)	L/M/H (6)	L/M/L (4)	18	III
D	L/M/H (6)	L/M/L (4)	L/M/L (4)	14	IV
E	L/M/H (6)	L/M/L (4)	L/M/L (4)	14	IV
OS-1	H/H/M (8)	H/M/L (6)	L/M/L (4)	18	III

H: High; M: Medium; L: Low; (Total Score)

Water Quality Improvement

The identified wetlands have moderate to high potential to provide water quality improvement. Wetlands C and OS-1 have the greatest potential to improve water quality due to their lack of a surface water outlet and position in the landscape where they receive pollutants from multiple sources. These wetlands are able to detain stormwater inputs and provide greater treatment of surface water. Wetlands C and OS-1 also contain a high percent cover of persistent vegetation which increases the potential for vegetation to filter out pollutants associated with stormwater. Wetlands A, B, D, and E are all either grazed by cows or regularly mowed and are therefore less capable of this function. Wetlands A, C, and OS-1 contain significant seasonal ponding, increasing the potential for removal of nitrogen within stormwater. Wetlands B, D, and E are situated on slopes and do not contain significant seasonal ponding and are therefore less capable of this function. All of the identified wetlands are within a developed landscape and have the opportunity to improve the water quality of stormwater runoff.

Within the subbasin, False Bay Creek is 303(d) listed by Ecology for high levels of fecal coliform. All of the identified wetlands are upgradient from this impaired waterbody and therefore have the opportunity to provide valuable water quality improvement. Wetlands A, B, C, D, and E outlet surface water that flows to False Bay Creek, increasing their importance for this function. The subbasin does not have a total maximum daily load (TMDL) water quality project.

Hydrologic Functions

Wetlands A, B, C, and OS-1 have moderate potential to provide hydrologic functions. Wetlands B and OS-1 either do not or only occasionally outlet surface water and therefore have greater potential to detain surface water. Wetland A has a permanently flowing outlet (False Bay Creek)

and is therefore less capable of this function. However, Wetland A, as well as Wetland OS-1, have the greatest capacity for live storage during a storm event.

Wetlands D and E have low potential to provide hydrologic functions. These wetlands do not have a depressional component and are therefore unable to store significant surface water. These wetlands are also grazed and do not contain enough vegetative structure to impede surface flows and reduce the velocity of stormwater during a storm event.

All identified wetlands are within a landscape that generates excess stormwater runoff and are therefore valuable for any amount of water storage or reduction in velocity of stormwater runoff. Wetlands A, B, and C are upgradient of areas along Bailer Hill Road which are impacted by flooding. Therefore, hydrologic functions provided by these wetlands are of increased value. Stormwater storage provided by Wetlands D, E, and OS-1 do not have the potential to mitigate the flooding that occurs at Bailer Hill Road.

Habitat Functions

Wetlands A and B have moderate potential to provide habitat function. These wetlands have greater structural complexity capable of supporting a wider variety of wildlife species. Wetland A has multiple plant classes and hydroperiods as well as significant amphibian breeding habitat and potential fish habitat (False Bay Creek). Wetland B also has multiple hydroperiods and amphibian habitat. These wetlands are in close proximity to other WDFW Priority habitats including the identified streams and associated riparian areas. Wetlands C, D, E, F, and OS-1 have low potential to provide habitat function. These wetlands lack the structural complexity provided by Wetlands A and B.

The identified wetlands are located on a landscape dominated by low and moderate intensity land uses such as low-density residential development, pasture, and hay fields. Therefore, the wetlands are relatively accessible to wildlife that can tolerate a moderate level of human disturbance. Very little undisturbed habitat exists in this landscape.

3.3 Upland Areas

3.3.1 Field Observations

Uplands within the review area include non-wetland pasture, ROW, and residential areas. The uplands are generally composed of grass and weedy herbaceous species as well as some areas of dense shrubs. Herbaceous vegetation observed in the upland pastures and ROW includes orchard grass (*Dactylis glomerata*), sweet vernal grass (*Anthoxanthum odoratum*), reed canarygrass, red fescue, tall fescue, bluegrass (*Poa sp.*), bentgrass, crested dog's tail (*Cynosurus cristatus*), queen Anne's lace (*Daucus carota*), hairy cat's ear (*Hypochaeris radicata*), dock (*Rumex sp.*), geranium (*Geranium sp.*), clover (*Trifolium sp.*), creeping buttercup, and vetch (*Vicia sp.*). Shrub vegetation was dominated by English hawthorn, snowberry, and Nootka rose. Black hawthorn, red osier dogwood, and Himalayan blackberry were also observed.

Upland soils were documented throughout the review area at SP 3, 8, 9, 11, 13, and 14. Topsoils in the uplands were either loam or silt loam. Subsoils ranged from either loamy sand, clay, or clay loam. Hydric soils were observed at upland plots SP 8, adjacent to Wetland A. However,

wetland hydrology indicators were not met at these locations and the area was determined to be non-wetland. Hydric soils were also observed at upland plot SP 11, adjacent to Wetland D. However, again, wetland hydrology indicators were not met at this location. Hydric soils were observed in other upland areas within the review area that no longer experience wetland hydrology. These hydric soils are likely relict from a time when the area was wetter and hydrology was less manipulated. San Juan Valley has been manipulated and maintained for agriculture for over a century. Fertile wetland soils have been drained by ditches, pond excavations, and drain tiles to facilitate prime farming conditions. While no drain tiles were identified during the site visits, they are evident in aerial photos and LiDAR in the vicinity of Wetland A.

Uplands within the review area were generally dry and did not meet hydrologic indicators. At upland plot SP 3, the water table was observed in the upper part. However, hydric soils were not observed at this location and the hydrology is not anticipated to persist into the growing season.

3.4 Fish and Wildlife Habitat Conservation Areas (FWHCAs)

San Juan Valley Creek confluences with False Bay Creek within the subject parcel. These streams are identified as Type F streams, though salmonid use does not appear to exist.

NES did not observe any state or federally Threatened, Endangered, or Candidate species or state Priority species within the review area or vicinity. State Priority Habitat observed within the review area includes herbaceous balds and the identified wetlands and streams.

Four excavated agricultural ponds were observed within the review area. These areas are not anticipated to be regulated by the County as FWHCAs, as they do not appear naturally occurring. No other ponds, or lakes, were observed within the review area.

3.4.1 Document Review

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

- **San Juan County Polaris: Fish and Wildlife Habitat Conservation Areas (San Juan County, 2024) (Figure 10)**
County critical area maps indicate three streams within the review area: two Type F streams and one untyped.
- **WDFW SalmonScape (WDFW, 2024b) (Figure 12)**
WDFW SalmonScape maps three perennial streams within the review area. Two of the streams are mapped with the presumed presence of coho salmon (*Oncorhynchus kisutch*), a state Priority species.
- **WDFW PHS Data on the Web Interactive Mapping (WDFW, 2024a) (Figure 11)**
WDFW PHS stream mapping is consistent with SalmonScape, however the third stream feature mapped by SalmonScape is identified as freshwater emergent wetland by PHS.

Golden eagle (*Aquila chrysaetos*) and little brown bat (*Myotis lucifugus*) occurrence is mapped within the township of the review area. Golden eagle is a state Candidate species.

- **False Bay Watershed Restoration Plan: Stream Habitat Assessment Report (Essency Environmental, 2017)**

False Bay Creek reach F4 and San Juan Valley Creek reach S1 confluence within the subject parcel. Both streams are documented to dry intermittently throughout the summer and lack conditions suitable for salmonid use.

- **U.S. Fish and Wildlife (USFWS) (IPaC 2024)**

Fish and wildlife species with the potential to occur in the review area by the aforementioned background resources are detailed in Table 3. Based on field observations made during the site visits, the project area lacks suitable habitat characteristics for these species and therefore they are not anticipated to utilize the project area.

Table 3. Federal and State Listed Species with potential presence in the Project Area.

Species	Federally-Listed	State Listed	Critical Habitat Mapped	Suitable Habitat Present
Bull Trout (<i>Salvelinus confluentus</i>)	Threatened	Candidate	N	N
Marbled Murrelet (<i>Brachyramphus marmoratus</i>)	Threatened	Endangered	N	N
Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)	Threatened	Endangered	N	N
Island Marble (<i>Euchloe ausonides insulanus</i>)	Endangered	Candidate	N	N
Monarch Butterfly (<i>Danaus Plexippus</i>)	Candidate	Candidate	ND	N

Y= Yes; N= No; ND: Not Designated

3.4.2 Field Observations

Streams

San Juan Valley Creek confluences with False Bay Creek within the subject parcel and flows south under Bailer Hill Road. No stream or ditch was observed in the location of the third mapped channel in the center of the parcel.

During the site visit the streams were flooded and portions of the channels were inaccessible. The on-site reach of False Bay Creek is broad and shallow (approximately 20 inches deep during the December site visit). San Juan Valley Creek is ditched through the site and ranges from 10 to 15 feet wide and was approximately 15 inches deep during the site visit. Downstream of the confluence with San Juan Valley creek, the channel becomes more defined again (ditched) and is approximately 12 feet wide.

Channel substrate in the streams is silty, and both channels are vegetated with reed canarygrass. Within the subject parcel, both stream channels have approximately 90 to 100 percent cover of overhanging vegetation, which was installed through restoration efforts over

the past ten years. Vegetation observed within the riparian area includes willow, hardhack, English hawthorn, snowberry, Nootka rose, black twinberry, and pea-fruited rose (*Rosa pisocarpa*). Reed canarygrass dominates the understory.

The stream is conveyed through an approximately 13.5-ft wide metal culvert under Bailer Hill Road.

False Bay Creek south of Bailer Hill Road is much more incised. The channel is approximately 10 feet below the surrounding grade. The vegetated riparian area along this reach is narrower and composed of snowberry, Nootka rose, hawthorn, and spiraea.

No salmonids are known to utilize the on-site reaches of the streams. The lack of suitable spawning substrate and low summer flow conditions prohibit fish usage (Essency Environmental, 2017).

Ponds

Four ponds were observed within the review area. One pond is located within the subject parcel within uplands in the central portion of the site. This pond appears to have been historically excavated and is actively used for the livestock that graze the site.

The three other identified ponds were observed remotely from the roadside ROW and are within the area of review. These three ponds appear man-made and historically excavated within uplands. All of the identified ponds appear isolated and are not anticipated to be fish-bearing. None of the identified ponds are anticipated to be regulated by the County as FWHCAs, as they do not appear to be naturally occurring.

No lakes were observed or are mapped within the review area.

Wildlife

NES did not observe any state or federally Threatened, Endangered, or Candidate species or state Priority species within the review area or vicinity. Waterfowl, primarily Canada geese (*Branta canadensis*), were observed loafing and foraging within ponded areas of Wetland A west of False Bay Creek. Evidence of deer was also observed within the review area. Overall, the review area contains suitable breeding, foraging, and refugia habitat for wildlife species that occupy lowland fields and are well adapted to human presence, such as raptors, songbirds, waterfowl, deer, coyotes, and other small mammals. Wildlife usage of the site is likely limited by surrounding development and roadways and the lack of undisturbed habitat in the surrounding landscape.

WDFW maps the occurrence of golden eagle, a state Candidate species, within the township of the review area. In Washington, golden eagle are mostly found on the east side of the Cascades. In western Washington, they are found in high-elevation alpine zones and sparingly in clearcut areas. Nests generally are located on cliffs and are occasionally located in very large trees that border on extensive clearcuts or above timberline (WDFW, 2024c). At lower elevations in western Washington, tree nests occur in conifer forests within 500 meters of clearcut, grassy, or shrubby open areas used for foraging (WDFW, 2004). Threats to this species are primarily due to declines in the distribution and abundance of its primary prey species, jackrabbits and

ground squirrels. In western Washington, mountain beaver is an important prey source (WDFW, 2024c). Golden eagle nesting was observed in the San Juan Island archipelago (<10 pairs) during the 1970s and 1980s. No golden eagles or nests were observed during the site visits. The site lacks large conifers which could potentially be utilized by golden eagles for nesting.

WDFW maps the occurrence of little brown bat within the township of the review area. This bat is not a listed species itself, but regular concentrations in naturally occurring breeding areas and other communal roosts are considered a Priority Habitat. According to WDFW, this species is a habitat generalist and occurs throughout the state. In Washington, it occurs most commonly in both conifer and hardwood forests and prefers riparian areas and sites with open water. Habitats utilized for day roosting include buildings and other structures, tree cavities and beneath bark, rock crevices, caves, and mines. Hibernacula for the species includes caves, abandoned mines, and lava tubes. For this species, protection of roosts is a priority for conservation and retention and recruitment of large snags, decadent trees, and hollow trees is important (WDFW, 2024c).

The review area does not contain hibernacula or day roost structures. However, riparian areas and ponded waters exist within the review area which may be utilized for foraging habitat. Usage of the site is likely limited to twilight and evening hours during foraging. No bats were observed during the site visits.

Herbaceous Balds

Herbaceous balds, a state Priority habitat, were observed within the review area, outside of the ROW. The balds were observed on the hillslope in the eastern portion of the site, west of Douglas Road and south of Bailer Hill Road. These are native plant areas located on shallow soils over bedrock, often on steep, exposed slopes with few trees. They support grasses, herbaceous plants, dwarf shrubs, brittle prickly pear cactus, mosses and lichens that are adapted for survival on shallow soils amid seasonally dry conditions. Trees that may be present include Douglas fir, Pacific madrone, and Garry oak. In San Juan County, this habitat supports many plant species that are rare or that grow in few other land cover types. They are the preferred habitat of the Taylor's checkerspot butterfly, which is a state and federal Endangered species (DNR, 2006).

3.5 Frequently Flooded Areas

The review area is outside of the FEMA mapped special flood hazard area (SFHA). However, flooding is known to occur along Bailer Hill Road, adjacent to False Bay Creek.

3.5.1 Document Review

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

- **FEMA Flood Map Service Center (FEMA, 2024)**

The entire review area is mapped in an area of minimal flooding (Zone X).

3.5.2 Field Observations

Flooding occurs along Bailer Hill Road, adjacent to False Bay Creek.

3.6 Shorelines

No shorelines are mapped within the review area or immediate vicinity. The review area appears to be outside of SMP jurisdiction.

3.6.1 Document Review

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

- **San Juan County Land Use and SMP Designations Map (San Juan County, 2016)**
No shorelines of statewide significance are mapped within the review area or immediate vicinity.

3.6.2 Field Observations

The review area does not appear to be within SMP jurisdiction.

4.0 REGULATIONS

Agencies with regulatory authority over site wetlands, streams, fish and wildlife habitats, shorelines, and/or frequently flooded areas are summarized in Table 4.

Table 4. Critical Areas Summary

Feature	Ecology Category/ Water Type	Regulatory Authority				Habitat Buffer/ Tree Protection Zone (ft)*	Water Quality Buffer (ft)*
		San Juan County	Corps	Ecology	WDFW		
Wetland A	II	X	X	X	X	300	100
Wetland B	III	X	X	X		150	80
Wetland C	III		X	X		N/A	N/A
Wetland D	IV	X	X	X		50	50
Wetland E	IV	X	X	X	X	50	50
Wetland OS-1	III	X		X		150	80
False Bay Creek	F	X	X	X	X	110	100
San Juan Valley Creek	F	X	X	X	X	110	100
Ponds	N			X		N/A	N/A

*Buffer based on high intensity land use; F = Fish-bearing stream, N = non-fish bearing

4.1 San Juan County

The review area contains the following wetlands, streams, and fish and wildlife habitat conservation areas (FWHCAs) under the jurisdiction of the San Juan County code:

- Wetland A
- Wetland B
- Wetland D
- Wetland E
- Wetland OS-1
- False Bay Creek
- San Juan Valley Creek

San Juan County regulates all wetlands, with the exception of Category II and III wetlands less than 1,000 square feet and Category IV wetlands less than 2,500 sq. ft. in size [San Juan County Code (SJCC) 18.35.095]. **Wetland C (181 sq. ft.) is a Category III wetland less than 1,000 sq. ft. and is not anticipated to be regulated by the County.** All other identified wetlands are anticipated to be regulated by the County.

San Juan County regulates streams and naturally occurring ponds that provide fish and wildlife habitat as FWHCAs [SJCC 18.35.130]. False Bay Creek and San Juan Valley Creek are anticipated to be regulated by the County. All four ponds identified within the review area are non-fish bearing and appear man made for agricultural uses. **Therefore, none of the identified ponds within the review area appear to be regulated by the County and therefore do not require a protective buffer.**

San Juan County requires a habitat buffer around regulated wetlands to protect functions. The future proposed road improvement projects in the review area ROWs is anticipated to be considered high intensity land use. Per SJCC Table 18.35.100-3, the anticipated habitat buffers for the identified wetlands are summarized in Table 4 above.

A water quality buffer is required around wetlands if proposed development drains to the wetland. Per SJCC Table 18.35.100-1, the anticipated water quality buffers for the identified wetlands are summarized in Table 4.

A water quality buffer is required around streams if the proposed development is located within 110 feet of the bank full width. Per SJCC Table 18.35.130-1, the anticipated water quality buffers for the identified streams is 100 feet (Table 4 above).

For areas along the identified streams that contain trees, a tree protection zone is required. Per SJCC Table 18.35.130-2, the anticipated tree protection zones for the identified streams is 110 feet (Table 4 above).

Buffers must remain naturally vegetated and activities allowed within wetlands and buffers are restricted to those defined by SJCC Table 18.35.100-4.

According to SJCC 18.35.100(B), *buffers do not extend across public roads, or private roads when the road design, flow of runoff, quantity of traffic, and/or gap in tree canopy results in an area that does not support the functions and values of the wetland, as determined by a qualified professional.* It is the

professional determination of NES that the existing roads and driveways adjacent to the site wetlands sever portions of the buffers, and areas landward of the roads no longer provide buffering functions to protect the wetlands.

Additionally, the county-maintained ditches do not appear to constitute regulated buffer *because they provide diminished support of the habitat, water quality and hydrologic functions and values of wetlands and FWHCAs, structures and development areas lawfully established prior to the effective date of the ordinance codified in this section are excluded from critical areas, their buffers or tree protection zones.* (SJCC 18.35.045). These ditches are routinely mowed and cleaned/dug-out for maintenance, which is considered a legal non-conforming activity, and therefore appear to be exempt from the provisions of the critical areas ordinance.

4.2 Washington State Department of Ecology

Ecology has authority over discharge into all waters of the state, which includes wetlands (including isolated wetlands) and streams and can impose buffers and compensatory mitigation for impacts (RCW 90.48.080).

Under Section 401 of the Clean Water Act (CWA), any activity involving a discharge into waters of the U.S. authorized under a Federal permit must receive CWA Section 401 Water Quality Certification (WQC). Ecology is authorized to make WQC decisions on federal, public and private lands in Washington, with a few exceptions (where EPA or Tribes have authority). Ecology reviews all CWA Section 404 permit applications received by the Corps for WQC. Ecology requires an “individual” review of all wetland disturbances greater than one-half acre, projects in tidal waters, or where impacts to wetlands and streams are determined to require additional review.

State laws that protect wetlands are broader than current federal regulations. The state can establish protocols for managing wetlands falling outside federal jurisdiction. For non-federally regulated wetlands, applicants must submit a request for an Administrative Order to comply with the state Water Pollution Control Act (Chapter 90.48 RCW).

4.3 Washington State Department of Fish and Wildlife

The WDFW requires issuance of a Hydraulic Project Approval (HPA) prior to any activities that may directly or indirectly affect waters of the state, including streams or associated wetlands. The WDFW is expected to have jurisdiction over False Bay Creek and San Juan Valley Creek, as they both meet the definition of a “water of the state” (RCW 77.55.011(26). Due to the direct surface connection to False Bay Creek, Wetlands A and E are also anticipated to be regulated by WDFW. However, only WDFW has the authority to make this determination.

4.4 US Army Corps of Engineers

The Corps regulates the discharge of dredged or fill material into wetlands, streams, and other drainages (ditches) that connect to Waters of the United States (WOTUS) under Section 404 of the Clean Water Act (CWA). The Corps regulates structures and/or work in or affecting the course, condition, or capacity of navigable Waters of the United States under Section 10 of the

Rivers and Harbors Act of 1899. The Corps requires pre-construction notification for all disturbances to wetlands, streams, and potentially to other drainages (ditches) prior to commencing any work. It is incumbent upon the landowner to disclose disturbances.

The Environmental Protection Agency (EPA) and the Corps have published a final rule defining the scope of waters federally regulated under the CWA. Jurisdictional waters include Traditional Navigable Waters (TNWs), tributaries, impoundments of jurisdictional waters (lakes and ponds), and adjacent wetlands (CFR Title 33 Chapter II Part 328) (40 CFR 122.2).

The Corps will automatically assert jurisdiction over: TNWs; wetlands adjacent to TNWs, non-navigable tributaries of TNWs that are relatively permanent (RPWs), and wetlands which directly abut RPWs.

Only the Corps has the authority to make jurisdictional determinations; however, the following is a description of the anticipated determinations. False Bay Creek is a relatively permanent water which flows to the Haro Strait (TNW) and is anticipated to be under Corps jurisdiction. Wetland A has a direct surface connection to False Bay Creek and is also anticipated to be automatically regulated by the Corps. Wetland D outlets to a ditch which appears to be relatively permanent and drains to False Bay Creek. Therefore, Wetland D is anticipated to be under Corps jurisdiction. Wetland E drains directly to False Bay Creek and is anticipated to be automatically regulated. Wetlands B and C appear to outlet towards ditches draining to San Juan Valley Creek and eventually False Bay Creek. Therefore these wetlands are expected to be regulated by the Corps. Wetland OS-1 does not have a surface water outlet and is not anticipated to be regulated by the Corps.

Activities in Waters of the United States that require Corps authorization may qualify for authorization under one of the general Nationwide Permits (NWP) if the activities meet the criteria. In the more commonly used NWP, discharge (fill) is limited to under 1/2 acre of wetland, 300 linear feet of stream, and 1/3 acre of tidal waters. Discharge exceeding the NWP thresholds requires an Individual Permit from the Corps. Mitigation is required for most activities. The Corps also has discretion to disallow disturbance to high quality wetlands. As part of their permit review, the Corps must verify the project complies with Section 7 of the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act, and Section 106 of the National Historic Preservation Act, (including archeological sites).

5.0 IMPACT ASSESSMENT

5.1 Mitigation Sequencing

The proposed project applied mitigation sequencing, as detailed below.

Avoid. The proposed project is unable to avoid direct wetland impacts, as the wetlands directly abut the existing roadway and the potential road alignment is restricted to the ROW.

Project plans have been revised to avoid alterations of the existing culvert at False Bay Creek.

The existing rockery abutting Wetland A will be replaced with a better engineered rock wall, avoiding additional wetland and buffer impacts that would otherwise be needed to accommodate the wider shoulders and filter strips.

The proposed road alignment avoids all existing Garry Oak (*Quercus garryana*) trees.

Minimize. The original project design proposed 6-ft paved shoulders on both sides of the existing roadway. The proposed shoulder width was reduced to 4 ft in order to minimize impacts to the adjacent critical areas.

Vegetated filter strips will be installed adjacent to the expanded roadway to filter stormwater runoff from the road and reduce impacts to the water quality within the adjacent wetlands and streams. Best Management Practices (BMPs) will be used during the construction process to minimize potential temporary water quality impacts.

Rectify. All areas of temporary wetland and buffer disturbance resulting from construction will be revegetated.

Reduce through preservation. A conservation easement currently exists on the mitigation parcel and will provide protection and preservation in perpetuity.

Compensate. The proposed project includes wetland enhancement, at compensation ratios recommended by Ecology, to compensate for unavoidable impacts to wetlands and buffer, as described in the following sections.

5.2 Critical Area Impacts

Proposed critical area impacts are shown in Figures 16-18, in drawings prepared by the San Juan County Public Works Department.

Permanent Wetland Impact

A total of 0.147 ac of permanent wetland impacts are proposed, including 0.027 ac of impact in Wetland A (Category II) and 0.120 ac of impact in Wetland B (Category III).

No indirect wetland impacts are anticipated due to the addition of vegetated filter strips along the road shoulders to provide runoff treatment which previously discharged directly to the wetland.

Permanent Buffer Impact

A total of 0.181 ac of permanent wetland buffer impacts are proposed.

Temporary Impacts

Temporary disturbance to 0.002 ac (80 sq. ft.) of Wetland A and 0.008 ac (360 sq. ft.) of buffer will result during construction. Areas of temporary wetland/buffer disturbance will be revegetated after construction is complete. Temporary construction activities within the existing maintained ditch has been excluded from this calculation, as vegetation is routinely removed by mowing and/or ditch cleaning.

5.3 Impact Analysis

The following sections provide an analysis of proposed impacts to the functional components of the adjacent wetlands and buffers. The analysis is based on best professional judgment using ecological knowledge of the site and the San Juan County CAO.

5.3.1 Water Quality/Runoff Filtration

The proposed impact areas are within the actively County-maintained ROW. The ROW is composed of grasses and weedy herbaceous species as well as dense hedges of native and non-native shrubs. Stormwater runoff generated from the road currently flows unobstructed into adjacent roadside wetland (Wetlands A and B) and buffer areas.

Determination: The proposed development has the potential to increase stormwater runoff into adjacent wetland and buffer areas due to the increase in impervious surface. However, the road improvements are not anticipated result in an increase of traffic. Therefore, no change in pollutant sources (cars) are expected over current conditions.

Furthermore, with the installation of the 4-ft vegetated filtration strips on both sides of the road, this stormwater will be treated before entering the wetlands and buffers. This has the potential to improve water quality entering the wetland above the current conditions.

The proposed project will result in a small loss in wetland area (0.147 ac) and therefore has the potential to result in loss of water quality improvement functions provided by that wetland area. However, the wetland areas to be impacted are within the actively maintained ROW and likely have reduced potential to provide water quality improvement due to routine mowing. To offset this potential reduction in function, the project includes compensatory wetland enhancement plantings between the cow pastures and the adjacent reaches of False Bay Creek and San Juan Valley Creek. The plantings are anticipated to increase filtration and uptake of surface water (and associated pollutants) within the wetland above the existing conditions.

With the proposed enhancement and installation of the vegetated filter strips, no net loss in wetland water quality improvement functions are anticipated with the proposed development.

5.3.2 Hydrology

The proposed impact areas are within the ROW which is actively maintained by the County. Stormwater runoff generated from the road currently flows unobstructed into adjacent roadside

wetland and buffer areas. These areas allow for infiltration of runoff into soils and the wetland areas are capable of providing a small amount of live storage of surface water during storm events.

Current best available science (BAS) does not provide clear evidence that wetland buffers protect the hydrologic functions within wetlands, since many of these functions are controlled at a larger landscape scale (Sheldon et al., 2005 and Hruby, 2013).

Determination: The proposed road widening has the potential to increase stormwater runoff into adjacent wetland and buffer areas due to the increase in impervious surface. The loss in wetland area (0.147 ac) has the potential to result in a loss of the hydrologic functions provided by these areas in the form of surface and ground water storage. These two factors have the potential to contribute to flooding that occurs along Bailer Hill Road and erosion downstream to a minor degree.

To mitigate this potential impact, the project includes wetland enhancement plantings along False Bay Creek and San Juan Valley Creek. The establishment of trees and shrubs is anticipated to increase rainwater interception and evaporation, slow surface water runoff from the adjacent pastures into the streams, and increase infiltration of surface water into the soils and uptake and evapotranspiration by the plants, thereby reducing and slowing surface water flowing downgradient. Therefore, with the proposed culvert upgrade and the enhancement plantings along the riparian areas of the streams, impacts to hydrologic functions from the proposed project are anticipated to be offset.

5.3.3 Habitat

The proposed impact areas are within the ROW adjacent to existing roads and driveways. Dense thickets of shrubs in some areas may provide forage and refugia for songbirds and small mammals, and provide a small amount of screening between the road and the interior of the wetlands. However, habitat in this area is generally considered low functioning due to the proximity to the road and regular maintenance of the ROW.

Determination: The proposed development will result in removal of some native shrub vegetation within wetland and buffer areas. However, these areas are generally degraded and low functioning due to the proximity to the road. The proposed enhancement plantings will be installed adjacent to the existing riparian areas and will expand on higher functioning habitat. The proposed enhancement will result in an overall increase in native tree and shrub vegetation within wetland areas. Therefore, with the proposed enhancement, a net uplift in habitat function is anticipated with the proposed project.

5.3.4 Summary

Due to the proximity of the road and regular maintenance within the ROW, the project area is generally low functioning for wetland and buffer water quality and habitat functions. With the proposed vegetated filtration strips, runoff water quality in the area is anticipated to be improved compared to existing conditions. With the proposed enhancement plantings along False Bay Creek and San Juan Valley Creek, native vegetation cover will increase habitat

potential and offset the increased impervious surface. **Overall, the project is anticipated to maintain or increase critical area function relative to existing conditions.**

6.0 MITIGATION

6.1 Mitigation Strategy

The following is a summary of the proposed mitigation measures.

Wetland Enhancement. A total of 1.468 ac of wetland enhancement is proposed as compensatory mitigation for the permanent wetland and buffer impacts. Table 5 below summarizes the calculated mitigation requirements for permanent wetland impacts, based on compensation ratios listed in Table 6B-1 from the *Wetland Mitigation in Washington State-Part 1 (Version 2)* guidance (Ecology, 2021).

Table 5. Compensation for Permanent Wetland and Buffer Impacts

Wetland	Category	Permanent Impact Area (ac)	Enhancement Compensation Ratio*	Required Wetland Enhancement (ac)
A	II	0.027	12:1	0.324
B	III	0.120	8:1	0.963
Buffer		0.181	1:1	0.181
Total				1.468

*Based on ratios shown in Table 6B-1 from the *Wetland Mitigation in Washington State – Part 1 (Version 2)*

The compensatory mitigation will be located within the review area on the San Juan County Land Bank property (parcel #352814001000), north of Bailer Hill Road (Figures 1 and 2). Enhancement will include installation of native trees and shrubs. The enhancement plantings will be sited adjacent to existing riparian enhancement areas on site (Figure 18). The proposed plantings are anticipated to enhance the wetland and stream riparian functions. The proposed project has been designed to result in no net loss of wetland functions.

Wetland/Buffer Restoration. Temporary disturbance to 0.002 ac of wetland and 0.008 ac buffer will result during construction. Areas of temporary wetland/buffer disturbance will be revegetated after construction is complete.

Site Protection. The following measures are proposed:

- Existing exclusion fencing on site will be relocated to encompass the proposed mitigation areas. Additional fencing will be installed if necessary.
- A Conservation Easement currently exists on the subject parcel that protects the entire site.

6.2 Mitigation Installation Methods and Procedures

6.2.1 Contractor Qualifications

Actions and tasks defined in this mitigation plan (including site preparation and planting) shall be either:

- 1) Conducted by a qualified contractor that can demonstrate a minimum of five years of experience with restoration and/or wetland mitigation installation projects in San Juan County. They must be able to provide an on-site staff member with the ability to identify native plants. Biological oversight is only needed by the project ecologist as specified in this mitigation plan.
- 2) If the applicant proposes to install mitigation themselves, or the contractor does not meet the above qualifications, the applicant shall hire a qualified ecologist to provide oversight during material placement and plant installation activities.

The installer shall contact NES or the project ecologist prior to start of work.

6.2.2 Mitigation Site Preparation

Thorough and proper site preparation is vital to project success. The following are the required tasks associated with the site enhancement:

- Mow and/or weed whack all grass within the mitigation sites. **Care must be taken not to mow/remove any existing native vegetation. Retain all existing native woody vegetation.**
- Remove all noxious weeds from the mitigation area including English hawthorn and Himalayan blackberry. Refer to the following Section for details on removal methods. Reed canarygrass is not expected to be eliminated from the mitigation sites, however, it should be suppressed through mowing/weed whacking to allow native trees and shrubs to become established.
- **Do not remove native vegetation from the mitigation sites. Native vegetation should be encouraged to fill in (natural recruitment/volunteers) within the mitigation sites.**

6.2.3 Invasive Species Removal

The following noxious vegetation is required to be removed prior to plant installation in the mitigation area:

- Himalayan blackberry (Class C). Himalayan blackberry within the mitigation areas should be mechanically removed by either hand pulling young plants or digging out the root wads of more established plants. Care should be taken to remove as much of the root as possible, to prevent resprouting.
- English Hawthorn (Class C). Mechanically remove by either hand-pulling young plants or digging out the root wads of more established plants. Care should be taken to distinguish the native hawthorn species (*Crataegus douglasii* and *C. suksdorfii*), which should be retained when present.

- Reed Canarygrass (Class C). Mow/weed whack multiple times a year to keep suppressed.
- Canada Thistle (Class C). Mow/weed whack multiple times a year to keep suppressed and prevent it from going to seed.

Remove any other plants identified on the 2024 San Juan County Noxious Weed List.

Do NOT remove native species volunteers, these recruits will count toward total native vegetation cover for the mitigation performance standards.

6.2.4 Soil Decompaction and Amendment

Soils within pasture areas have been heavily compacted by cattle. Compacted soils can greatly reduce the establishment and long-term health of plants. In areas of heavy compaction, soils should be rototilled to a minimum depth of 10 inches. All exposed soil shall be covered with a minimum of two inches of woodchip mulch.

6.2.5 Plant Installation

The following plant installation methods should be followed to increase the probability of project success. Improper planting may result in poor plant growth and/or death.

Installation Standards

- Installation must be done according to the agency-approved mitigation plan. Any changes must be approved by the project ecologist.
- Any species substitutions must be approved by the project ecologist.

Plant Installation Timing

- Planting shall take place during the dormant season (between October 15th and April 1st).
- Bare root material may only be used between December 1st and March 15th.
- The contractor shall contact the project ecologist prior to installation to consult on placement.

Source of Plant Material

- Plant material shall be obtained from native plant nurseries growing stock from the Puget Sound lowlands. When possible, obtain plants from a local (San Juan County, Whatcom County, or Skagit County) nursery. Provide the project ecologist written documentation from the plant supplier verifying plant origin PRIOR to plant installation.

Planting Guidelines

- For each container plant, a hole should be dug 1.5 times the size of the plant pot, to prevent the plant from becoming root bound. Actual planting shall follow the digging of holes as closely as possible to prevent the excavated soil from drying.

- Each plant shall be placed in a hole, and the hole shall be backfilled with native soil. Backfill shall be tamped down to remove voids in the soil. Excess soil shall be smoothed and firmed around plants, creating a slight depression to collect water.
- Do not install plants too deep or too shallow. Care should be taken to not bury the root crown of trees (the top-most root of root ball) as this can harm the long-term growth and life of the tree. The root crown should be placed at the ground level. Plants should also be installed deep enough in the soil that the root ball is not exposed.
- Avoid planting tangled-up roots or up-turned roots (“J” roots) as this may cause the plant to grow poorly or die.
- All plants shall be watered immediately after planting unless soils are heavily wet.

Mulch

- Mulch shall be placed around all installed trees and shrubs.
- The installer shall apply mulch in a three (3)-foot diameter ring around all installed woody plant material in the buffer enhancement areas, and over all exposed soils. Mulch should be spread on all bare ground. Mulch shall be applied in a “donut” around each plant with a depth of six (6) inches at the center grading to a depth of three (3) inches at each edge.
- No mulch shall be placed within one (1) inch of the plant stems but shall cover the root balls to the maximum possible extent.
- Mulch shall consist of clean hogfuel, woodchips with greens, woodchips with no greens, or coarse shredded bark (no beauty bark or stump grindings).
- Woodchip size shall average between 1/4 and 1/2 inches thick and one (1) to three (3) inches long (thin cut pulp chips are ideal).
- Mulch must be clean, free of materials detrimental to plant health, and free of invasive plant seeds and soil.

Tables 6-8 details the planting specifications for the enhancement areas. Enhancement areas are shown in Figure 18.

Table 6. Planting Specifications for Wetland Enhancement Areas (1.468 ac)

Scientific Name	Common Name	Condition	Grade (min. size)	Spacing	# Plants
Trees <i>Populus balsamifera</i>	Black cottonwood	B	18" minimum	18' OC	50
<i>Salix lasiandra</i>	Pacific willow	B			100
<i>Salix sitchensis</i>	Sitka willow	B			100
<i>Salix hookeriana</i>	Hooker's willow	B			100
Shrubs <i>Cornus sericea</i>	Red osier dogwood	B		6' OC	200
<i>Rosa pisocarpa</i>	Peafruit rose	B			350
<i>Lonicera involucrata</i>	Black twinberry	B			300
<i>Physocarpus capitatus</i>	Pacific ninebark	B			250
<i>Spiraea douglasii</i>	Hardhack	B			350
Total					1,800

OC = On-center, B = bareroot

Table 7. Planting Specifications for Wetland A Restoration Area (80 sf)

Scientific Name	Common Name	Condition	Grade (min. size)	Spacing	# Plants
<i>Spiraea douglasii</i>	Hardhack	B	18" minimum	5' OC	4
Total					4

OC = On-center, B = bareroot

Table 8. Planting Specifications for Wetland A Buffer Restoration Area (360 sf)

Scientific Name	Common Name	Condition	Grade (min. size)	Spacing	# Plants
<i>Symphoricarpos albus</i>	Snowberry	B	18" minimum	5' OC	10
<i>Crataegus douglasii</i>	Black Hawthorn	B			5
Total					15

OC = On-center, B = bareroot

6.3 As-Built, Monitoring, and Maintenance

6.3.1 As-Built Documentation

After installation is complete, the applicant shall submit an as-built documentation memo to the permitting agencies within 90 days. The applicant shall document where minor site design

changes to the mitigation plan were necessary, the final planting schedule, photographs, and receipts from site installation.

The as-built report shall include documentation that the following tasks occurred, per this restoration plan:

- Removal of invasive vegetation
- Installation of all trees, shrubs, and mulch
- Relocation/installation of livestock exclusion fencing

6.3.2 Monitoring

Monitoring of the sites shall occur over a five-year period in years 1, 2, 3, and 5, following completion of the as-built inspection. Monitoring shall be performed by the applicant or the project ecologist. The monitoring report shall evaluate the project’s success based on the project performance standards contained in this report. Data collected during monitoring will be summarized in a technical memo. This technical memo shall be provided to the permitting agencies no later than December 31st of each monitoring year.

The following are the goals, objectives, and performance standards for the mitigation sites. The following performance standards shall be used to measure project success during the monitoring period.

Goal 1. Enhance the wetland and stream functions through installation of native trees and shrubs.

Objective 1. Increase percent cover of native species through establishment of native trees and shrubs in the enhancement areas.

Performance Standard 1.a. Vegetation in the enhancement areas shall meet the metrics detailed in Table 9.

Table 9. Performance Standards for Wetland Enhancement Areas

Item	Year 1	Year 2	Year 3	Year 5	Long Term
Survival (%) (Compared to installed quantity)	100	N/A			Natural mortality
Mean cover (%) (Installed and volunteer)	N/A	≥5	≥25	≥50	≥80
Number of Native Species	≥7	≥5	≥5	≥5	≥5

Objective 2. Limit the cover of invasive plant species in the enhancement areas in order to provide for successful native plant establishment.

Performance Standard 2.a. The mitigation sites shall be free of Class A noxious weeds. Class B and C noxious weeds shall cover no more than twenty (20) percent of the mitigation sites, excluding reed canarygrass. Weed classifications are based on the current Whatcom County Noxious Weed List or per ecologist recommendations during monitoring.

Performance Standard 2.b. All grass within a 3-ft diameter of each installed tree or shrub shall be mowed below 6-inches in height until the installed plants exceed 36 inches tall.

6.3.3 Maintenance

The applicant shall provide the maintenance activities detailed in this report and subsequent annual monitoring memos throughout the monitoring period. Maintenance shall be performed each year after the as-built report is approved. Table 10 details the general maintenance tasks.

Table 10. Five-Year Enhancement Area Maintenance Tasks

Monitoring Year(s)	Time of Year	Task	Description
Years 1-5	Summer	Irrigate newly installed plants	New plant material shall be irrigated, if possible, once per week whenever less than one inch of rainfall occurs over any two-week period from June 1 through August 15 and once every other week from August 16 through September 30. This should occur for the first year after installation and for any additional plants installed years 1-5.
Years 1-5	Fall and Winter	Replace dead trees and shrubs	Replace dead trees and shrubs in order to meet survival or percent cover standards. Restoration contractor may offer 100 percent survival guarantee within the first year of planting. Request plant substitutions if necessary.
Years 1-5	Growing Season (May to September)	Remove Noxious Weeds	Remove all Class A noxious weeds from property. Remove Class B and C noxious weeds as needed to meet performance standards. Apply herbicide to control invasive material only as recommended by the ecologist in the as-built or monitoring report(s).

6.3.4 Long-Term Site Management

A long-term maintenance checklist is included in Appendix C. After completion of the five-year monitoring period, the applicant or landowner shall provide documentation shall be provided to the Corps every five years.

6.3.5 Contingency Plan

If there is a significant problem with the mitigation achieving its performance standards, the project proponent shall work with NES or another qualified biologist to develop a Contingency Plan. Contingency Plans can include, but are not limited to additional plant installation, erosion control, and plant substitutions of type, size, quantity, and location. Such Contingency Plan shall be submitted to applicable regulatory agencies by December 31st of any year in which deficiencies are discovered.

APPENDIX A: REFERENCES

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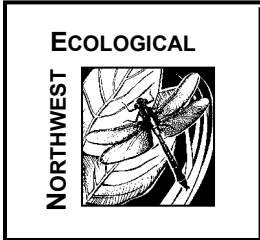
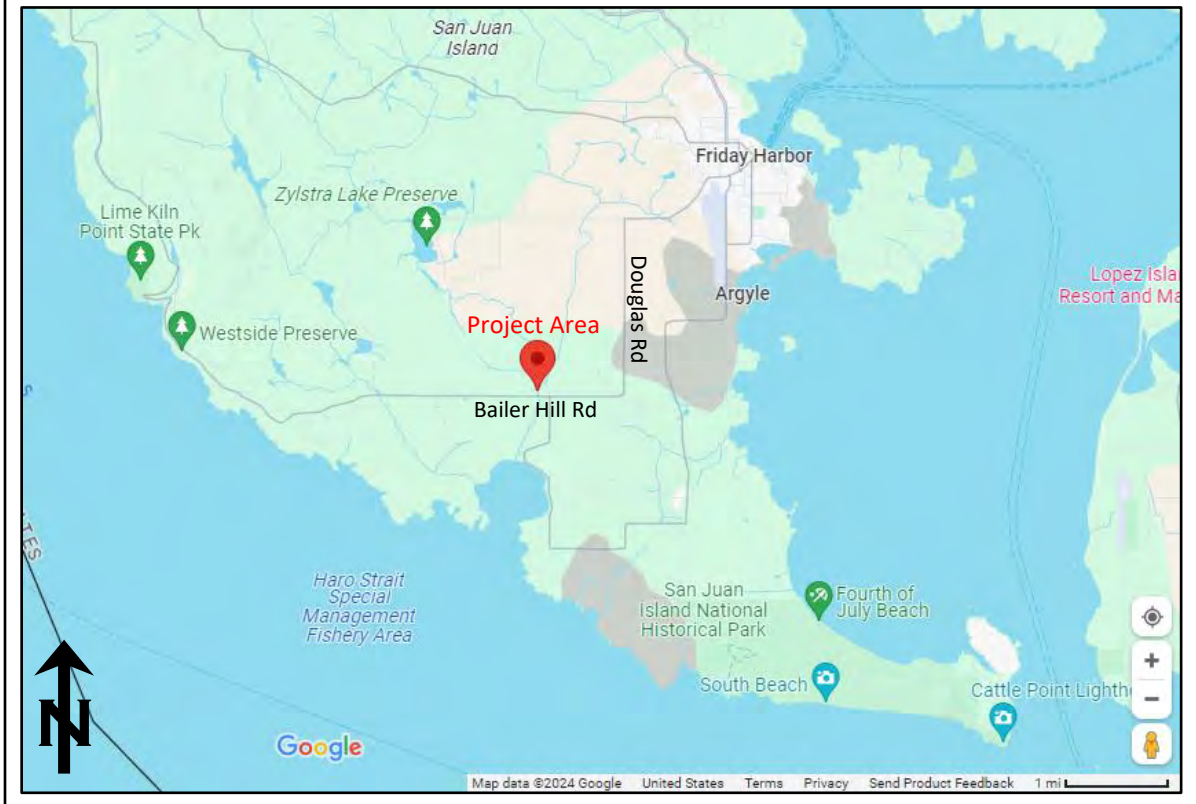
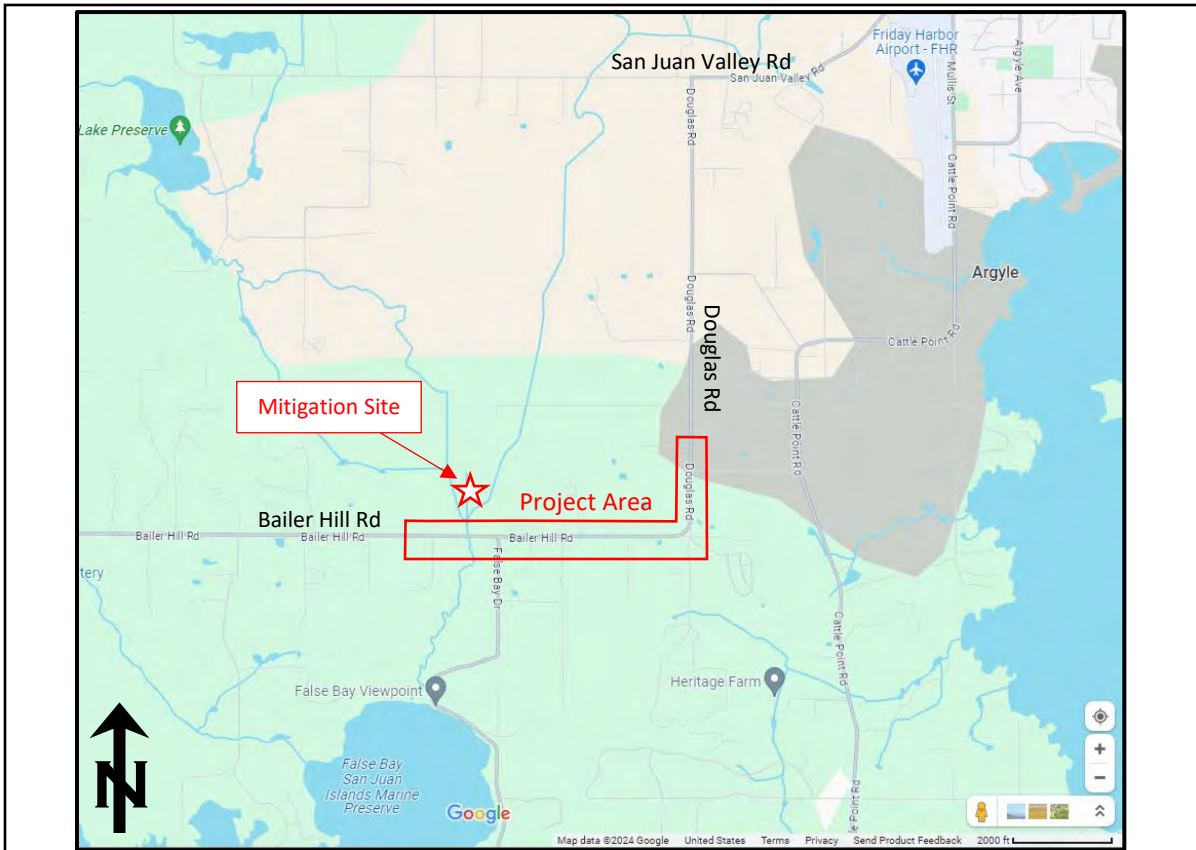
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APPENDIX B: FIGURES

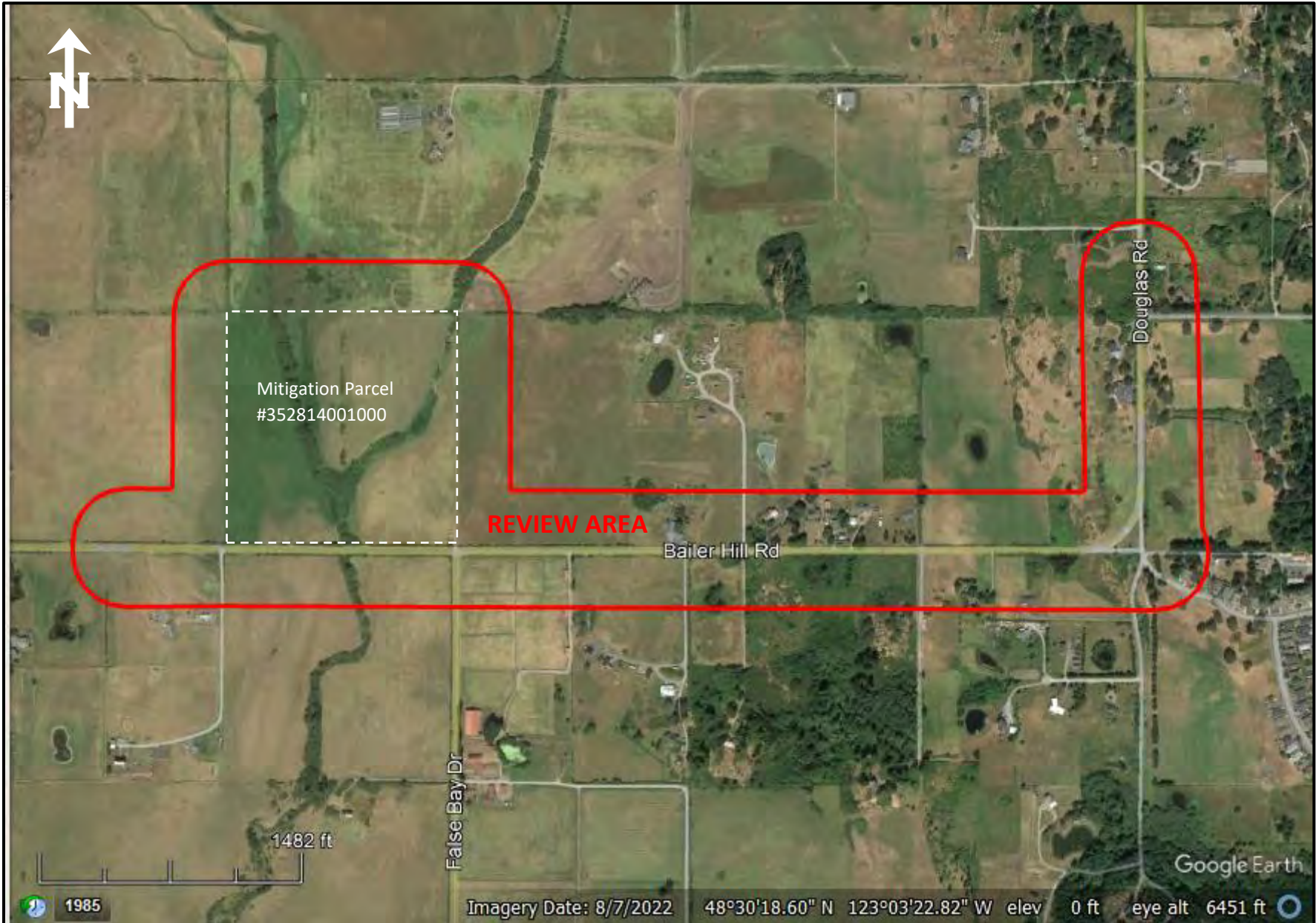



**Vicinity Maps
(Google Maps)**

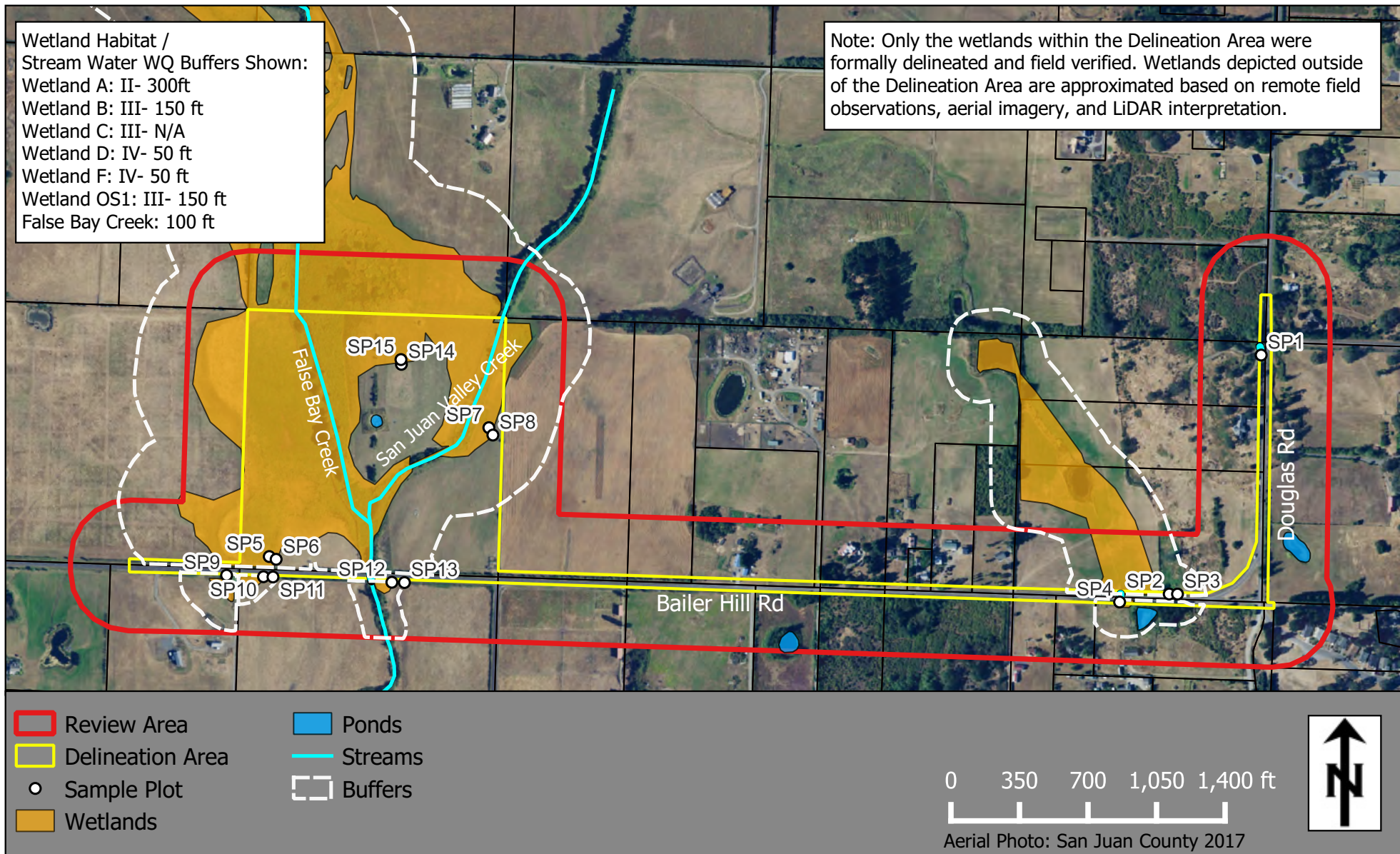
**Bailer Hill/Douglas Road
Road Improvements Project
Critical Areas Assessment & Mitigation Plan**


Figure 1

July 2024



<p>ECOLOGICAL</p> <p>NORTHWEST</p> 	<p>2022 Aerial Photo (Google Earth)</p> <p>Bailer Hill/Douglas Road Road Improvements Project Critical Areas Assessment & Mitigation Plan</p>	<p>Figure 2</p> <p>July 2024</p>
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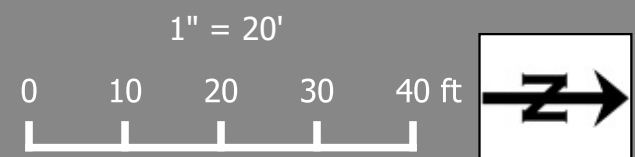
ECOLOGICAL NORTHWEST 	Wetland Map (Overview)	Figure 3
	Bailer Hill/Douglas Road Road Improvements Project Critical Areas Assessment & Mitigation Plan	July 2024

Note: Only the wetlands within the Delineation Area were formally delineated and field verified. Wetlands depicted outside of the Delineation Area are approximated based on remote field observations, aerial imagery, and LiDAR interpretation.



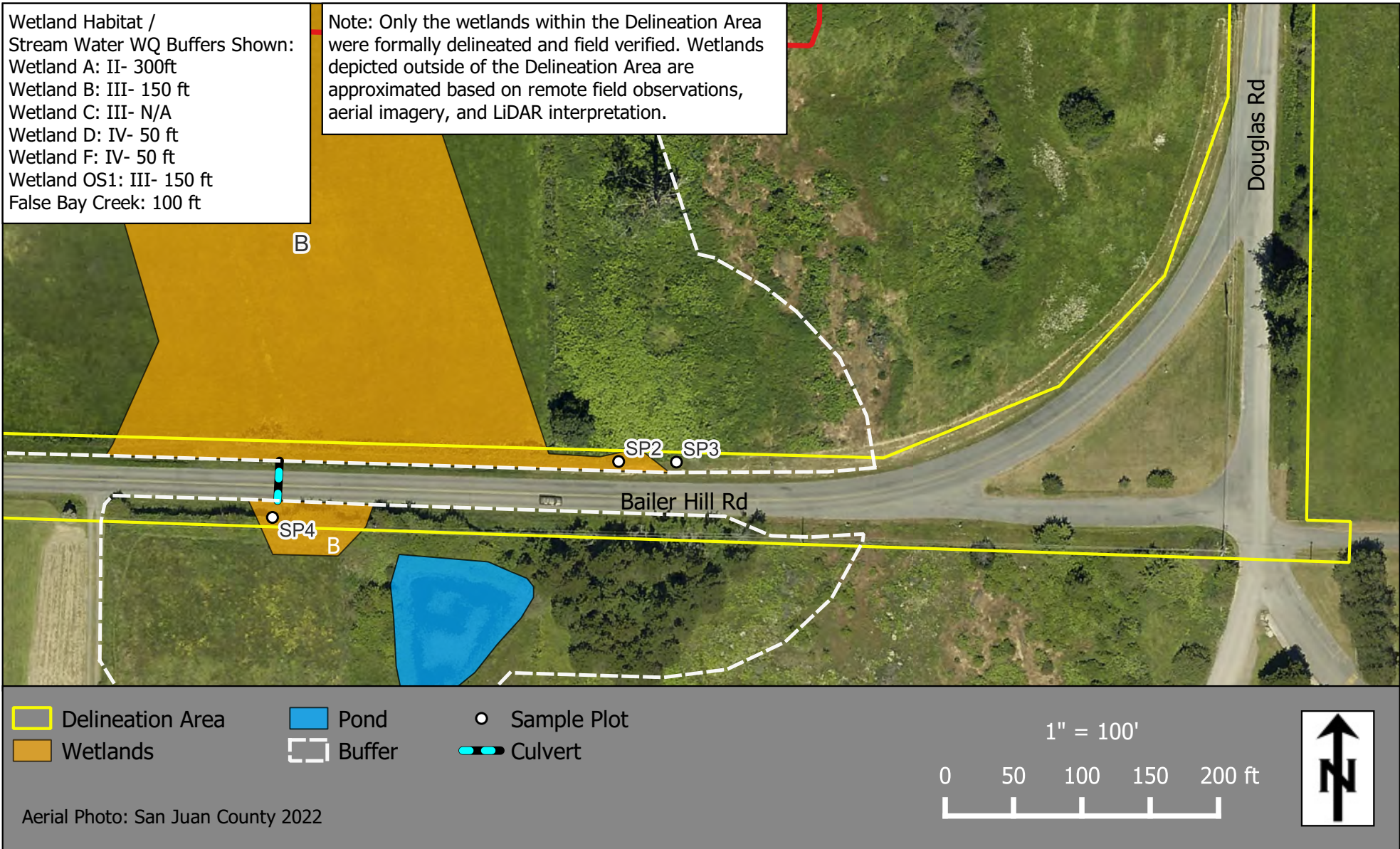
Wetland Habitat /
Stream Water WQ Buffers Shown:
Wetland A: II- 300ft
Wetland B: III- 150 ft
Wetland C: III- N/A
Wetland D: IV- 50 ft
Wetland F: IV- 50 ft
Wetland OS1: III- 150 ft
False Bay Creek: 100 ft


- Delineation Area
- Wetlands
- Sample Plot

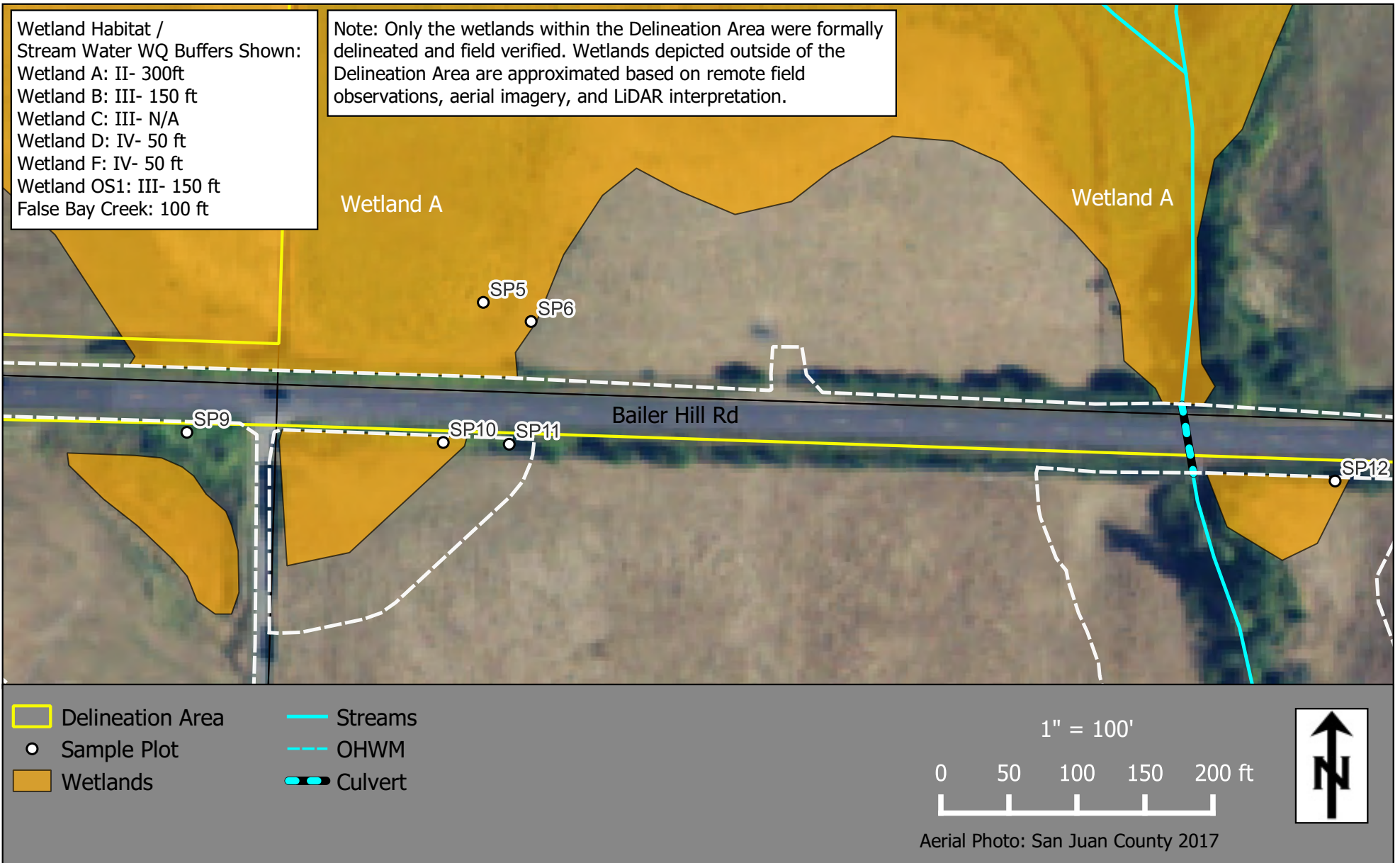



Aerial Photo: San Juan County 2022

<p>E COLOGICAL</p> <p>NORTHWEST</p>	<p>Wetland Map (Northern Extent)</p> <p>Bailer Hill/Douglas Road Road Improvements Project Critical Areas Assessment & Mitigation Plan</p>	<p>Figure 4</p> <p>July 2024</p>
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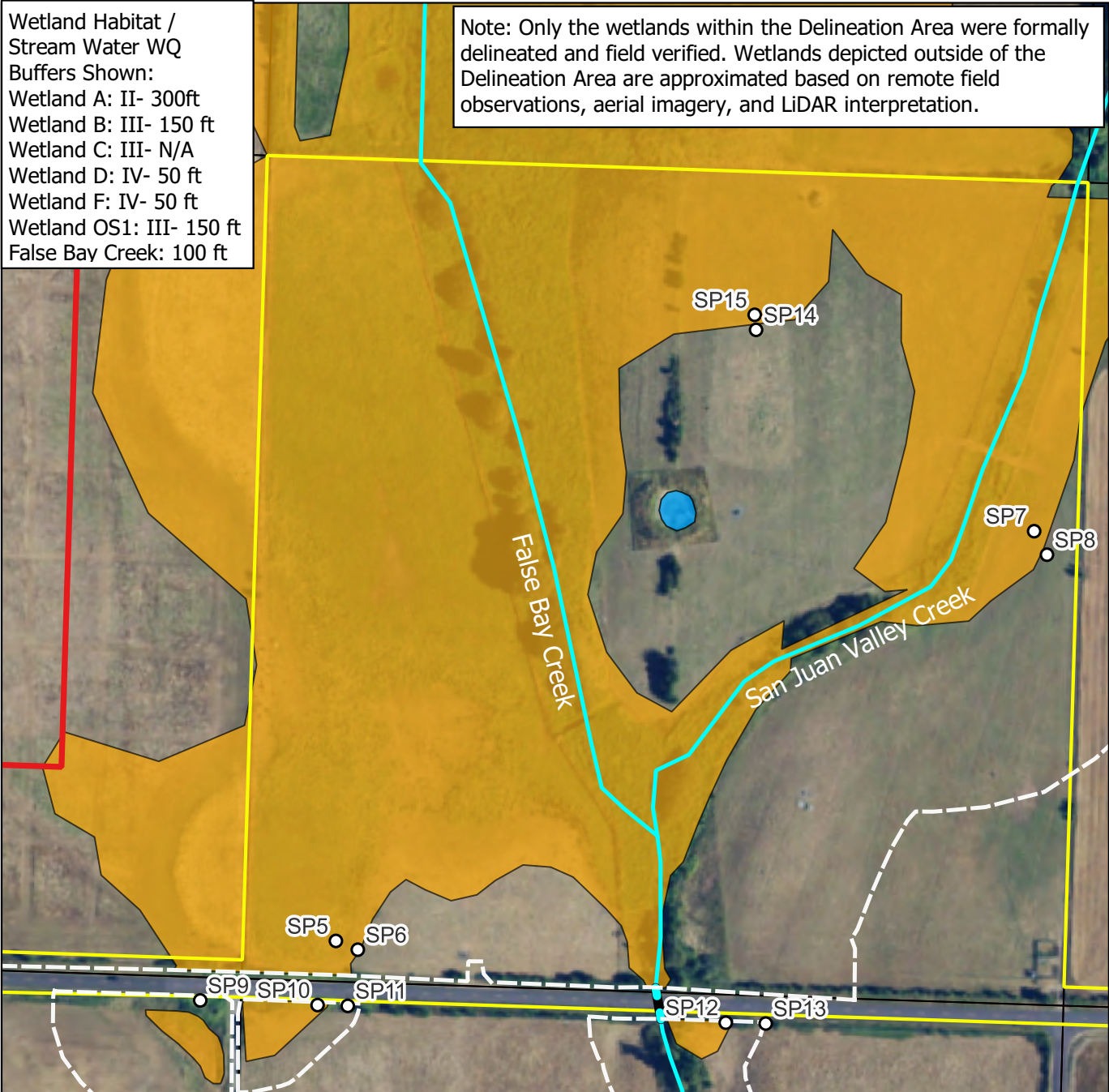
<p>ECOLOGICAL</p> <p>NORTHWEST</p> 	<p align="center">Wetland Map (Eastern Extent)</p> <p align="center">Bailer Hill/Douglas Road Road Improvements Project Critical Areas Assessment & Mitigation Plan</p>	<p align="center">Figure 5</p> <p align="center">July 2024</p>
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<p>ECOLOGICAL NORTHWEST</p> 	<p align="center">Wetland Map (Western Extent)</p> <p align="center">Bailer Hill/Douglas Road Road Improvements Project Critical Areas Assessment & Mitigation Plan</p>	<p align="center">Figure 6</p> <p align="center">July 2024</p>
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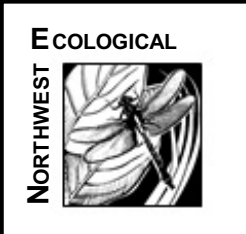
Wetland Habitat / Stream Water WQ Buffers Shown:
 Wetland A: II- 300ft
 Wetland B: III- 150 ft
 Wetland C: III- N/A
 Wetland D: IV- 50 ft
 Wetland F: IV- 50 ft
 Wetland OS1: III- 150 ft
 False Bay Creek: 100 ft

Note: Only the wetlands within the Delineation Area were formally delineated and field verified. Wetlands depicted outside of the Delineation Area are approximated based on remote field observations, aerial imagery, and LiDAR interpretation.



<ul style="list-style-type: none"> Review Area Delineation Area Sample Plot 	<p>Site Wetlands</p> <ul style="list-style-type: none"> Buffer Streams Pond 	<p>1 in = 250 ft</p>	
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Aerial Photo: SJC 2022




**Wetland Map:
Subject Parcel**

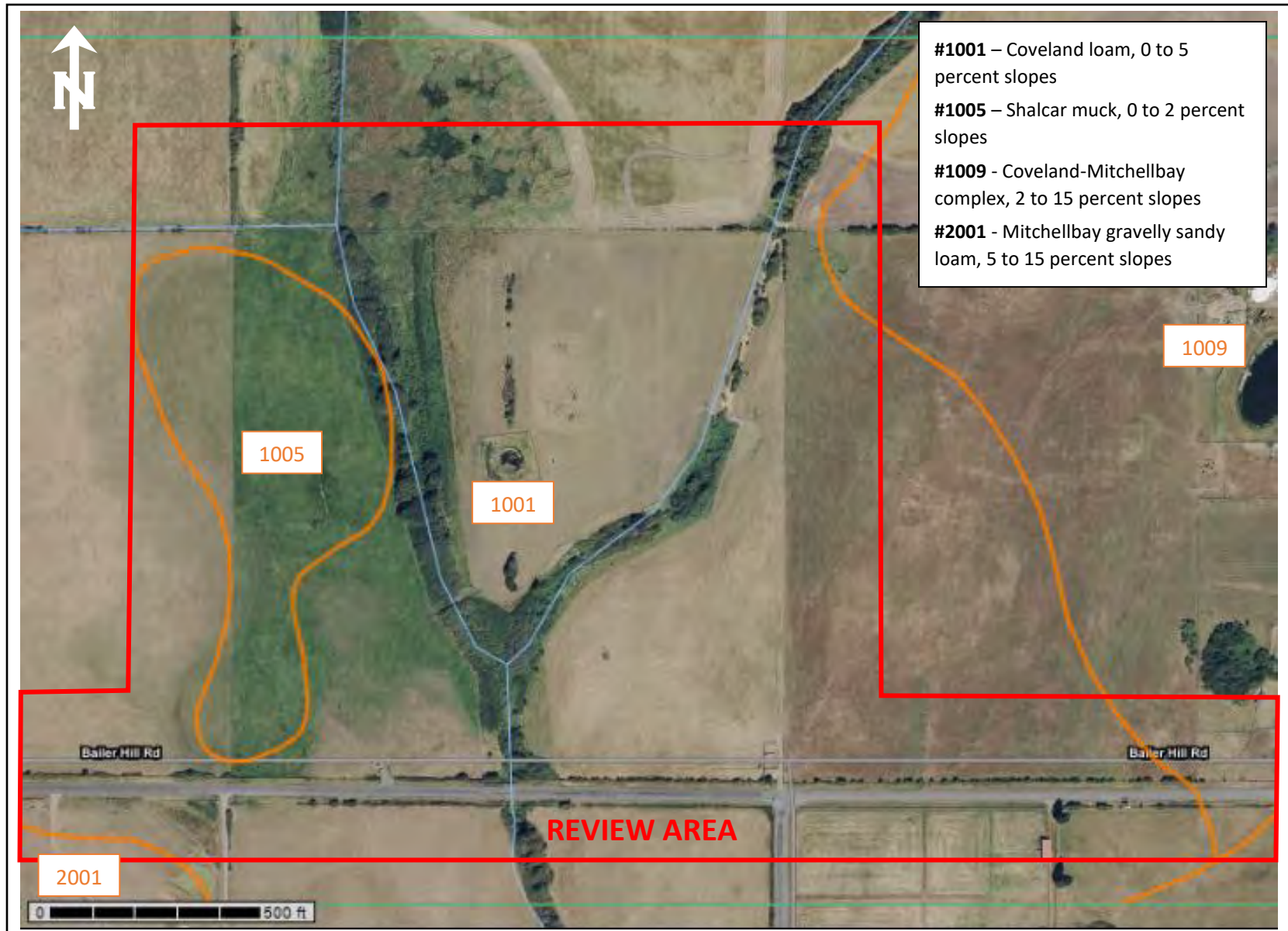
Bailer Hill/Douglas Road
Road Improvements Project
Critical Areas Assessment & Mitigation Plan


Figure 7

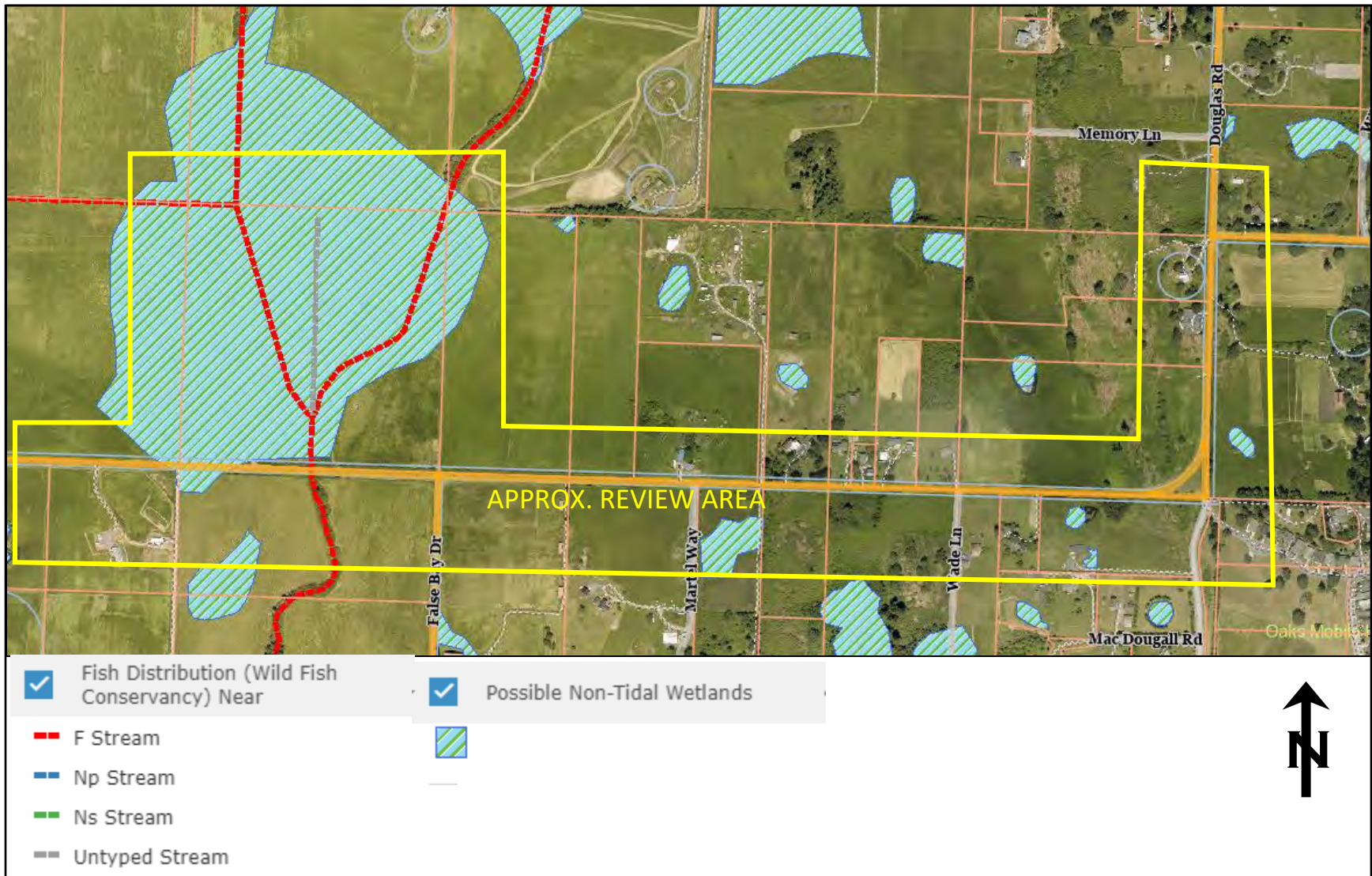
July 2024



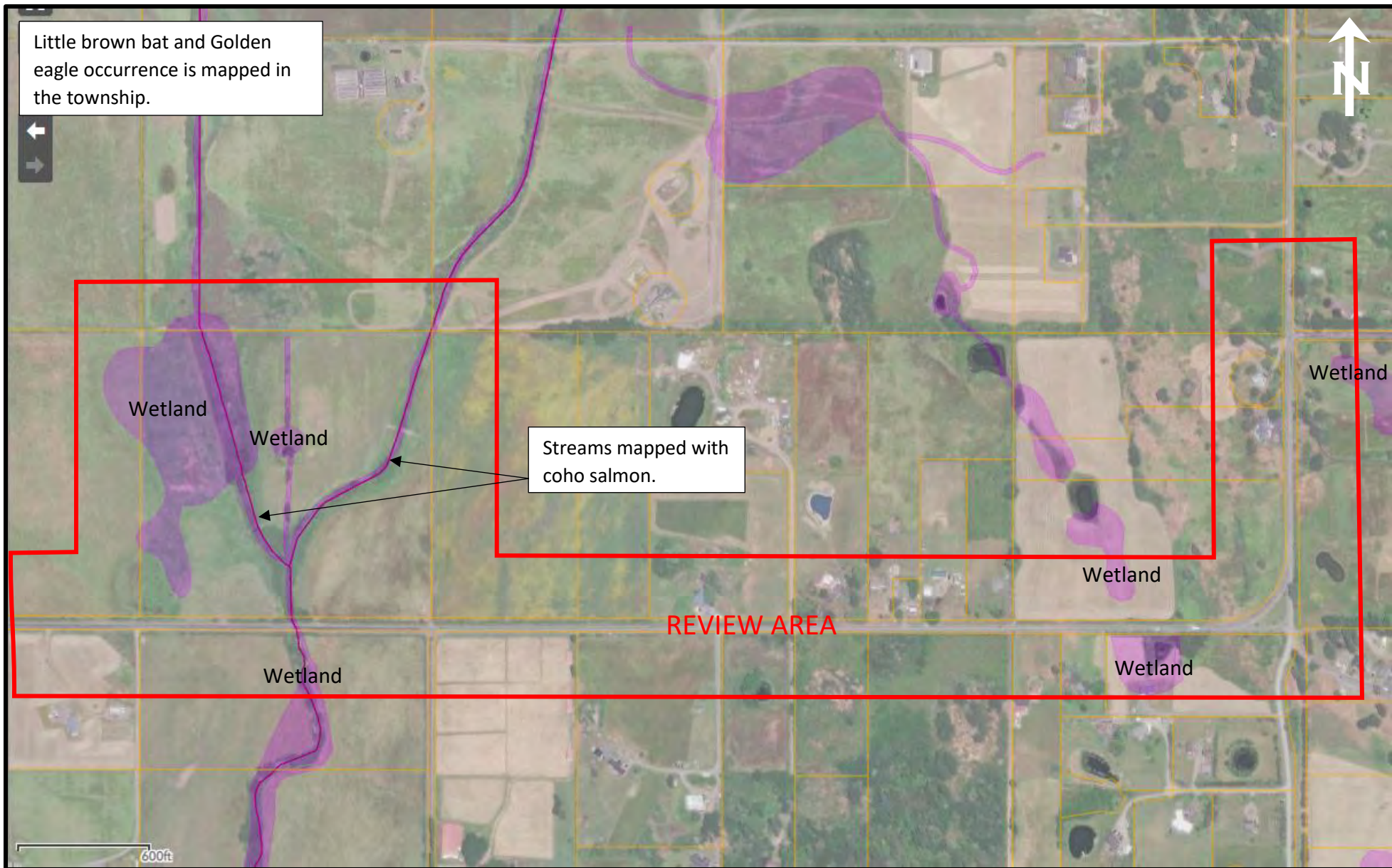
<p>ECOLOGICAL</p> <p>NORTHWEST</p> 	<p>Soil Map – Eastern Review Area (NRCS Soil Survey)</p> <p>Bailer Hill/Douglas Road Road Improvements Project Critical Areas Assessment & Mitigation Plan</p>	<p>Figure 8</p> <p>July 2024</p>
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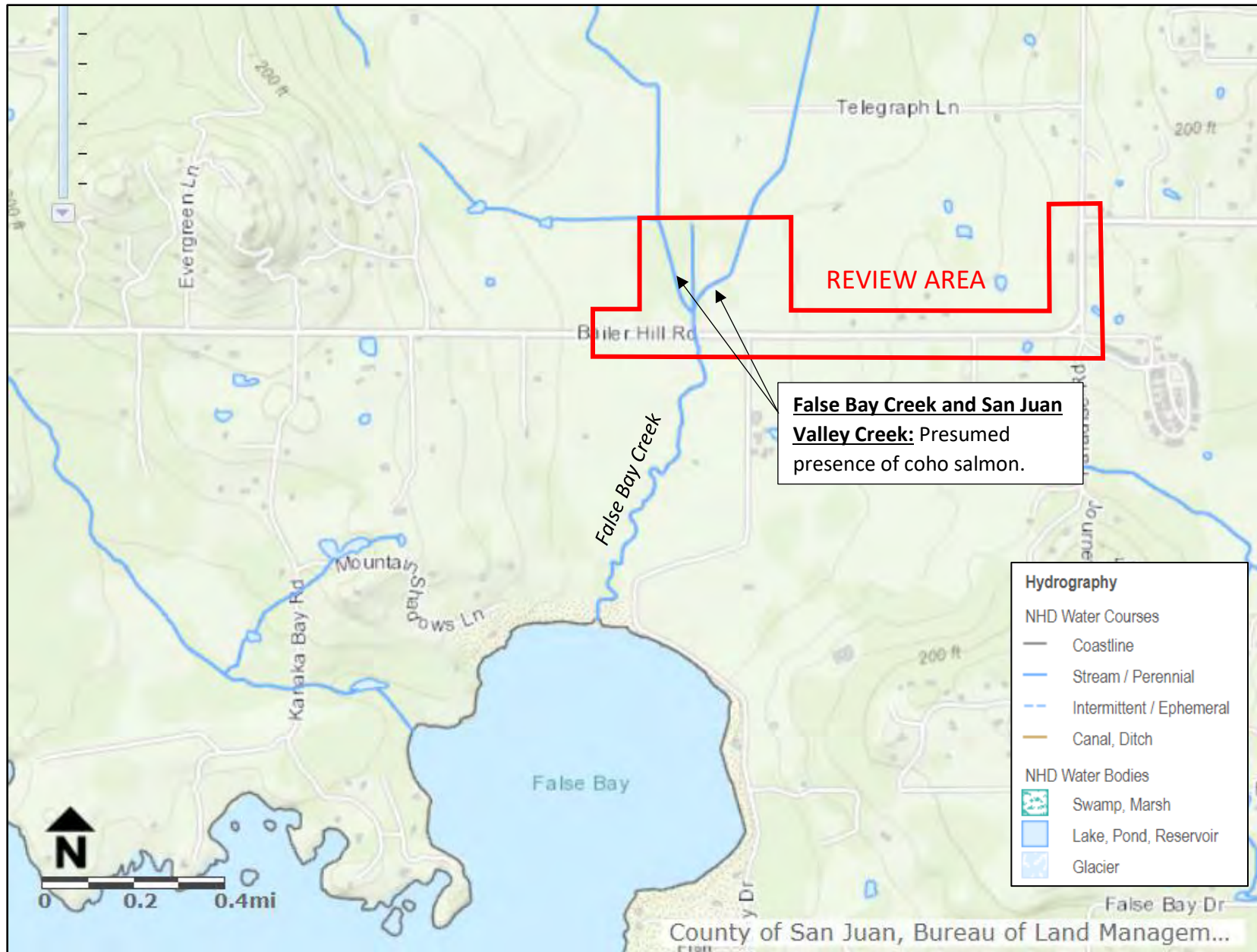
<p>ECOLOGICAL</p> <p>NORTHWEST</p> 	<p>Soil Map – Western Review Area (NRCS Soil Survey)</p> <p>Bailer Hill/Douglas Road Road Improvements Project Critical Areas Assessment & Mitigation Plan</p>	<p>Figure 9</p> <p>July 2024</p>
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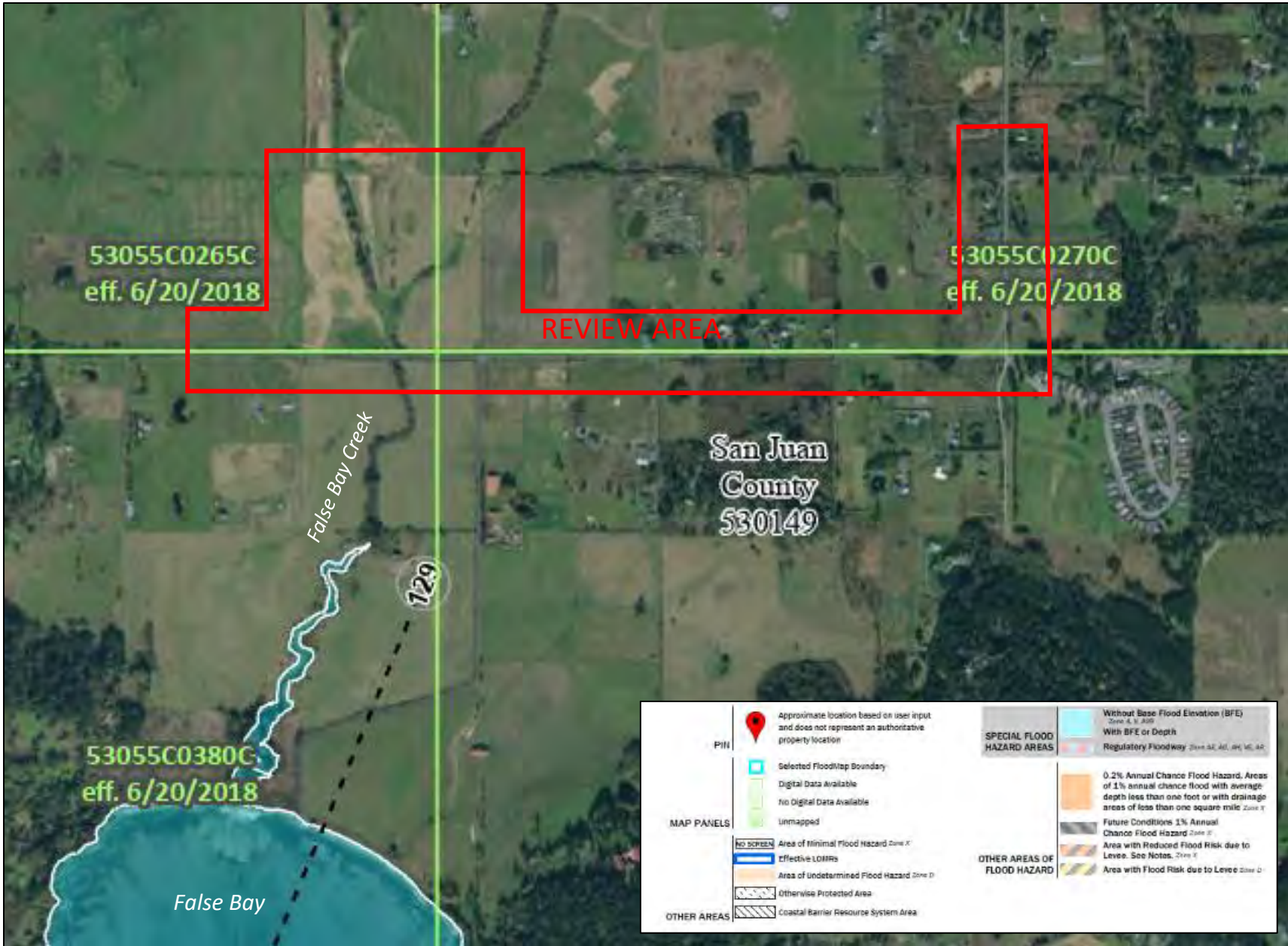
<p>ECOLOGICAL</p> <p>NORTHWEST</p>	<p>Polaris Critical Areas Map (San Juan County, 2024)</p> <p>Bailer Hill/Douglas Road Road Improvements Project Critical Areas Assessment & Mitigation Plan</p>	<p>Figure 10</p> <p>July 2024</p>
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<p>ECOLOGICAL</p> <p>NORTHWEST</p> 	<p>PHS Map (WDFW)</p> <p>Bailer Hill/Douglas Road Road Improvements Project Critical Areas Assessment & Mitigation Plan</p>	<p>Figure 11</p> <p>July 2024</p>
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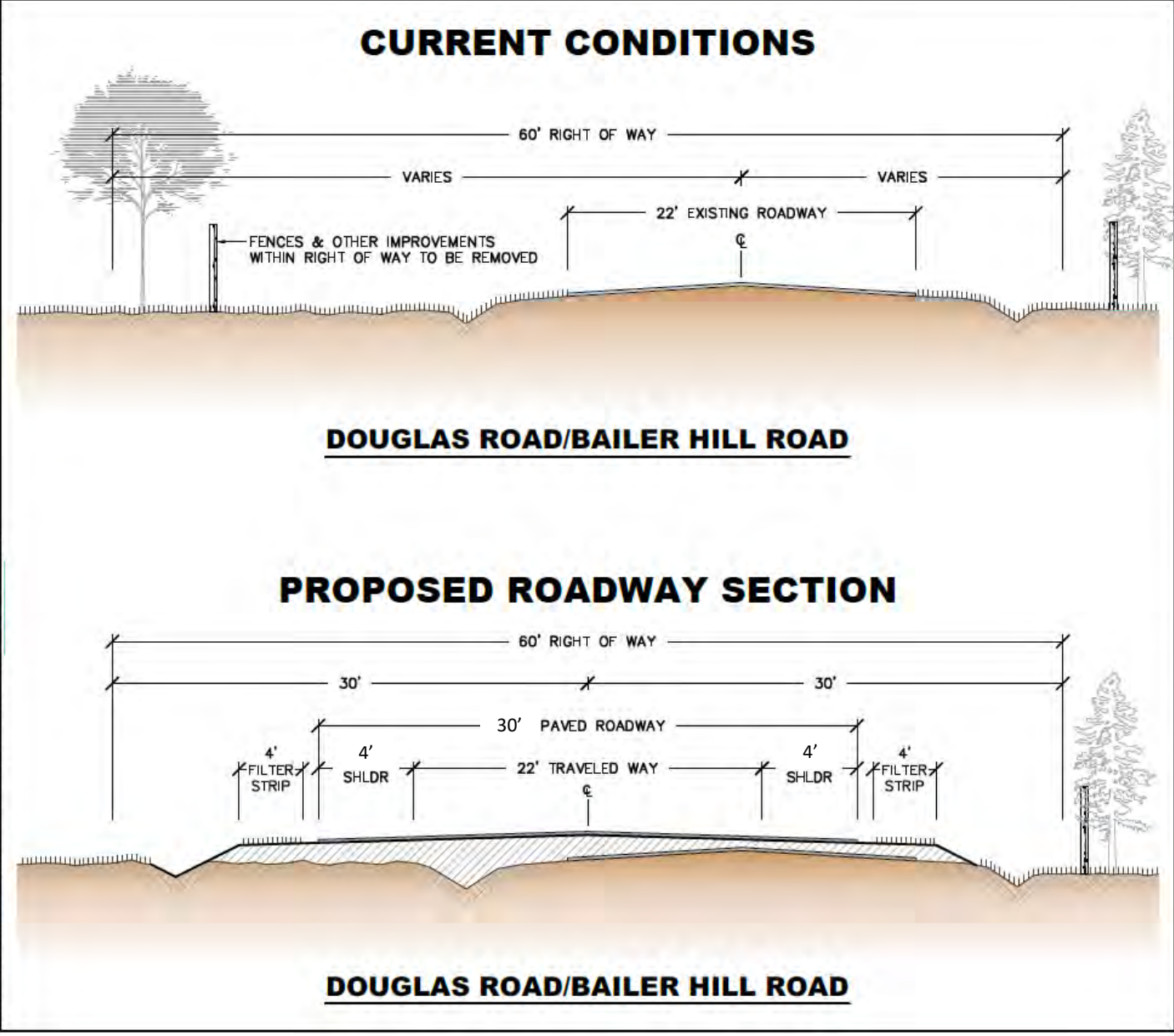


<p>ECOLOGICAL</p> <p>NORTHWEST</p> 	<p>SalmonScape Map (WDFW)</p> <p>Bailer Hill/Douglas Road Road Improvements Project</p> <p>Critical Areas Assessment & Mitigation Plan</p>	<p>Figure 12</p> <p>July 2024</p>
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<p>ECOLOGICAL</p> <p>NORTHWEST</p> 	<p>FEMA Flood Map</p> <p>Bailer Hill/Douglas Road Road Improvements Project Critical Areas Assessment & Mitigation Plan</p>	<p>Figure 13</p> <p>July 2024</p>
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 PLOT DATE: 2024-11-21



San Juan County
 Public Works Department
 Office of the County Engineer
 915 Spring Street, Friday Harbor, WA 98250

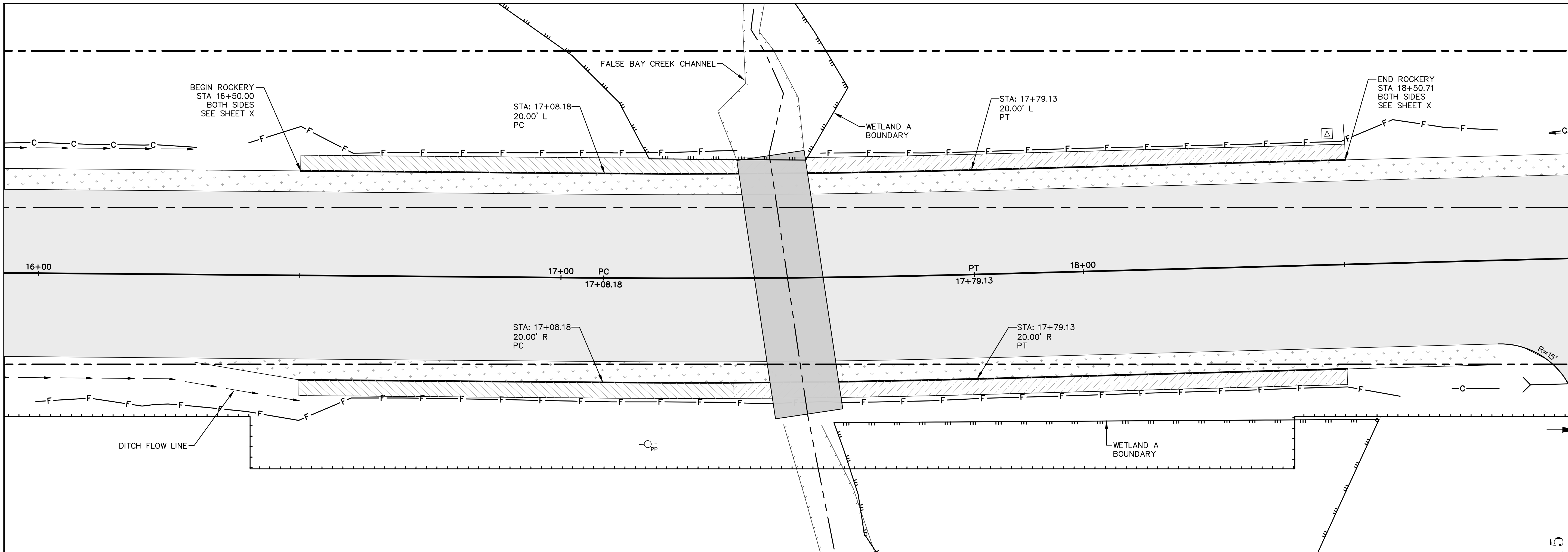


DOUGLAS RD. MP 3.15 – BAILER HILL RD. MP-4.45
 CRP 011303 DOUGLAS/BAILER HILL ROAD IMPROVEMENTS

ECOLOGICAL 	Typical Road Section (San Juan County) Bailer Hill/Douglas Road Road Improvements Project Critical Areas Assessment & Mitigation Plan	Figure 14 July 2024
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2024-7-17

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ROCKERY LEGEND

	TWO MAN ROCK
	THREE MAN ROCK
	FOUR MAN ROCK
	FIVE MAN ROCK

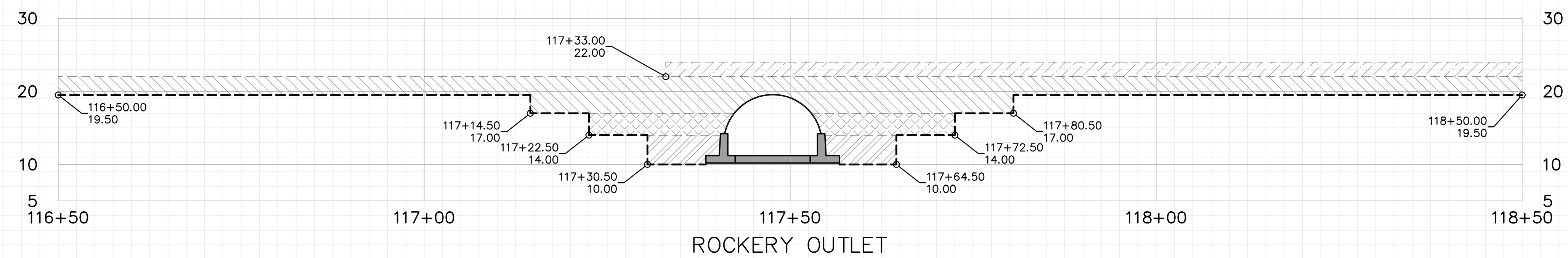
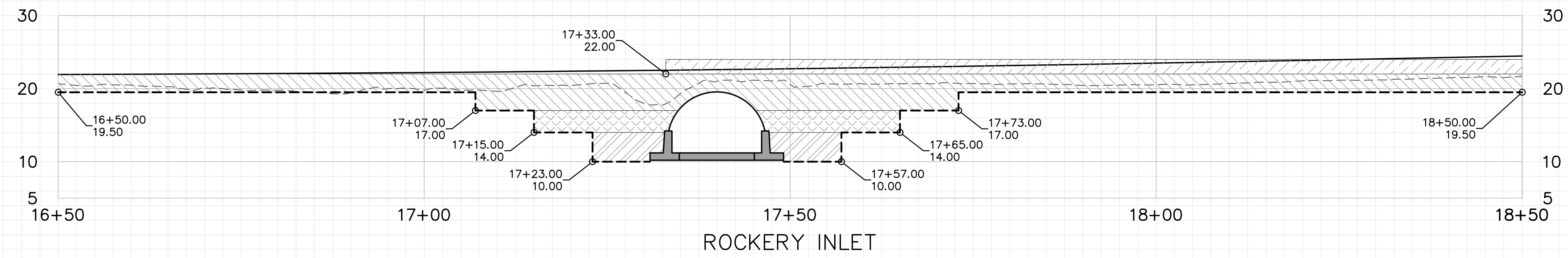


Figure 15

Public Works Department
San Juan County
915 Spring St. P. O. Box 729 • (360) 370-0500
Friday Harbor, WA 98250 • Fax (360) 378-6405
www.sanjuancc.com/278/current-projects
email: pubwks@sanjuancc.com

7/17/2024
PLOTTED: JPH
DRAWN: JPH
SURVEYED: ES III
DESIGNED: JPH
CHECKED: JPH
APPROVED: JPH

JEFFERY A. SHARR
DEPT. COUNTY ENGINEER

**PLAN & PROFILE
CULVERT ROCKERY**
DOUGLAS-BAILER HILL RD IMPROVEMENTS
SAN JUAN COUNTY PUBLIC WORKS

MARK	DATE	REVISION



MATCH LINE STATION 13+50.00 SHEET 2

Figure 16. Impact Map (West)

LEGEND

- PROJECT ALIGNMENT
- WETLAND BOUNDARY
- HABITAT BUFFER BOUNDARY
- WATER QUALITY BUFFER
- TREE PROTECTION ZONE
- EXISTING BACK OF DITCH
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF GRAVEL
- TEMPORARY WETLAND IMPACT
- PERMANENT WETLAND IMPACT
- TEMPORARY HABITAT BUFFER IMPACT
- PERMANENT HABITAT BUFFER IMPACT
- PROPOSED CONSTRUCTION FOOTPRINT
- ORDINARY HIGH WATER MARK
- FALSE BAY CREEK THALWEG

CRP 011303 DOUGLAS ROAD/BAILER HILL ROAD WETLAND IMPACTS

WETLAND	CATEGORY	WATER QUALITY BUFFER (FT)	HABITAT BUFFER (FT)	TEMPORARY HABITAT BUFFER IMPACT (SF)	PERMANENT HABITAT BUFFER IMPACT (SF)	TEMPORARY WETLAND IMPACT (SF)	PERMANENT WETLAND IMPACT (SF)
A	II	100	300	360	3,515	80	1,775
B	III	80	150	-	4,360	-	5,245
D	IV	50	50	-	-	-	-
E	IV	50	50	-	-	-	-
OS-1	III	80	150	-	-	-	-
FALSE BAY CREEK	TYPE F	100	-	-	-	-	-
TOTAL				360	7,875	80	7,020

DOUGLAS ROAD/BAILER HILL ROAD IMPROVEMENTS

SAN JUAN ISLAND
SAN JUAN COUNTY PUBLIC WORKS



Public Works Department
San Juan County
1609 Beaverton Valley Road | PO Box 729
Friday Harbor, WA 98250
email: (360) 370-0500 | pubwks@sanjuanco.com
www.sanjuanco.com/2777/Public-Works

CRP No. 011303
ROAD No. 01
MP 3.15 - MP 4.45

SHEET
1 OF X

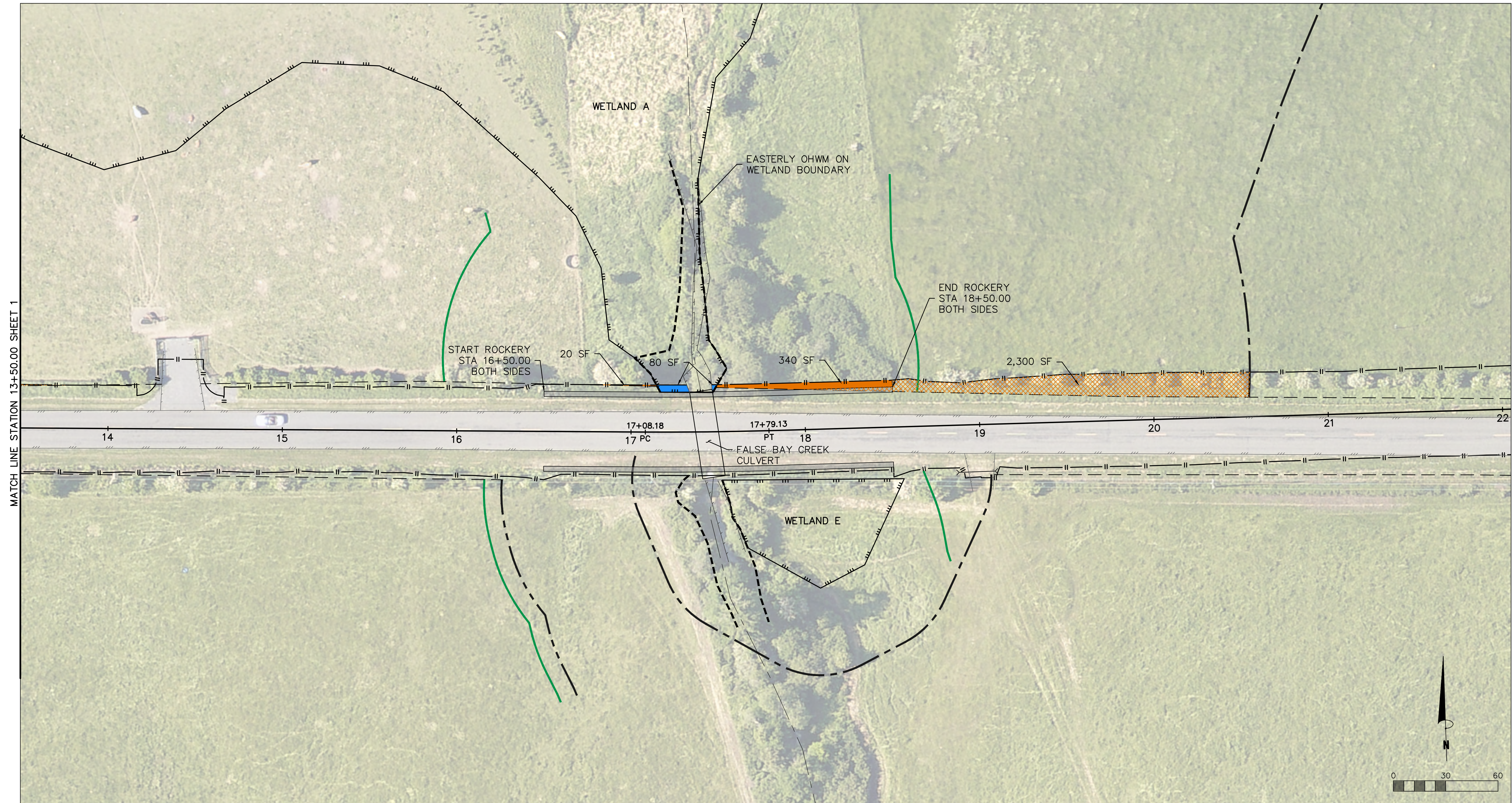


Figure 17. Impact Map (Central)

LEGEND

	PROJECT ALIGNMENT		TEMPORARY WETLAND IMPACT
	WETLAND BOUNDARY		PERMANENT WETLAND IMPACT
	HABITAT BUFFER BOUNDARY		TEMPORARY HABITAT BUFFER IMPACT
	WATER QUALITY BUFFER		PERMANENT HABITAT BUFFER IMPACT
	TREE PROTECTION ZONE		PROPOSED CONSTRUCTION FOOTPRINT
	EXISTING BACK OF DITCH		ORDINARY HIGH WATER MARK
	EXISTING EDGE OF PAVEMENT		FALSE BAY CREEK THALWEG
	EXISTING EDGE OF GRAVEL		

CRP 011303 DOUGLAS ROAD/BAILER HILL ROAD WETLAND IMPACTS

WETLAND	CATEGORY	WATER QUALITY BUFFER (FT)	HABITAT BUFFER (FT)	TEMPORARY HABITAT BUFFER IMPACT (SF)	PERMANENT HABITAT BUFFER IMPACT (SF)	TEMPORARY WETLAND IMPACT (SF)	PERMANENT WETLAND IMPACT (SF)
A	II	100	300	360	3,515	80	1,775
B	III	80	150	-	4,360	-	5,245
D	IV	50	50	-	-	-	-
E	IV	50	50	-	-	-	-
OS-1	III	80	150	-	-	-	-
FALSE BAY CREEK	TYPE F	100	-	-	-	-	-
			TOTAL	360	7,875	80	7,020



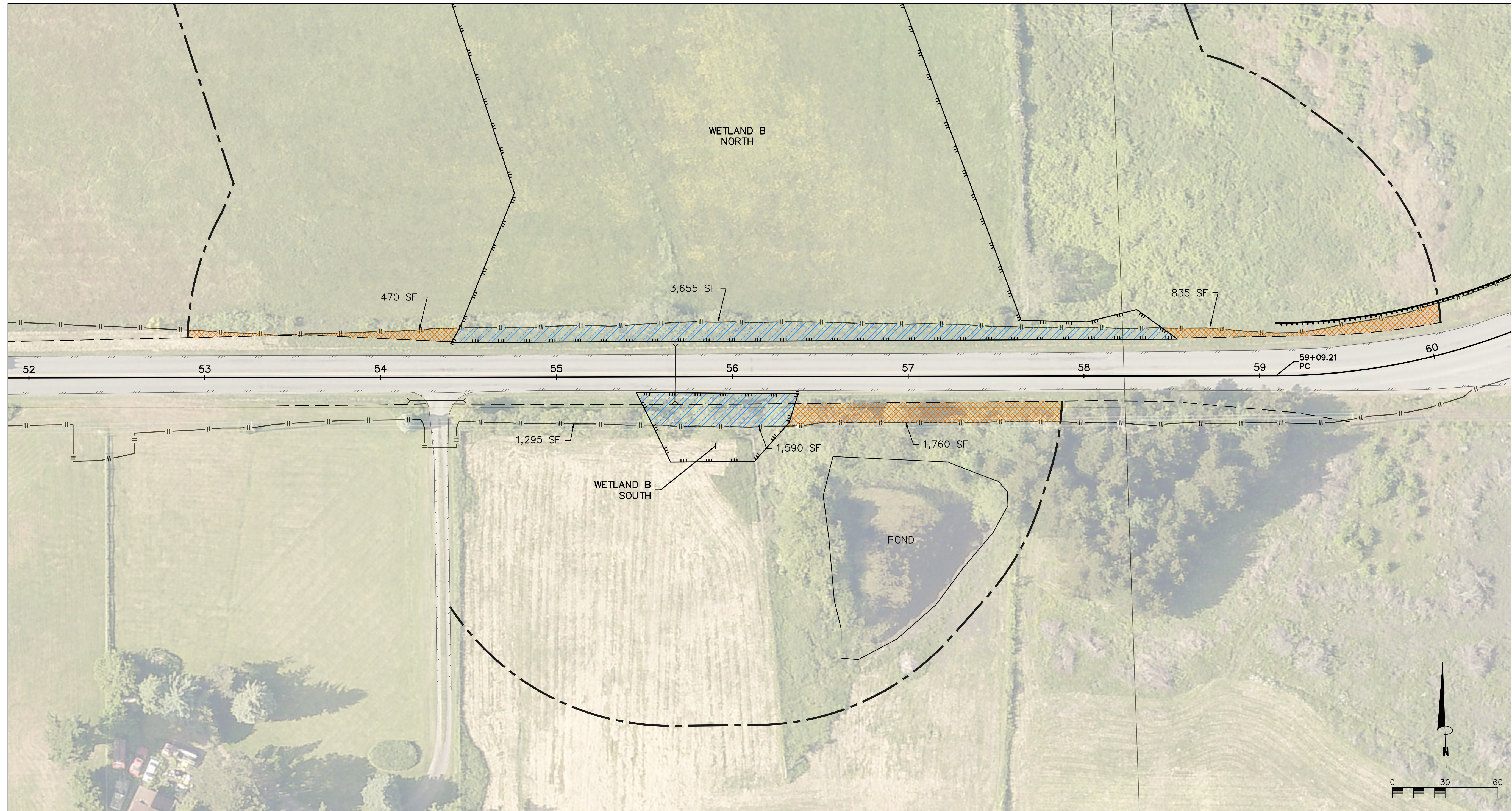


Figure 18. Impact Map (East)

LEGEND

	PROJECT ALIGNMENT		TEMPORARY WETLAND IMPACT
	WETLAND BOUNDARY		PERMANENT WETLAND IMPACT
	HABITAT BUFFER BOUNDARY		TEMPORARY HABITAT BUFFER IMPACT
	WATER QUALITY BUFFER		PERMANENT HABITAT BUFFER IMPACT
	TREE PROTECTION ZONE		PROPOSED CONSTRUCTION FOOTPRINT
	EXISTING BACK OF DITCH		ORDINARY HIGH WATER MARK
	EXISTING EDGE OF PAVEMENT		FALSE BAY CREEK THALWEG
	EXISTING EDGE OF GRAVEL		

CRP 011303 DOUGLAS ROAD/BAILER HILL ROAD WETLAND IMPACTS

WETLAND	CATEGORY	WATER QUALITY BUFFER (FT)	HABITAT BUFFER (FT)	TEMPORARY HABITAT BUFFER IMPACT (SF)	PERMANENT HABITAT BUFFER IMPACT (SF)	TEMPORARY WETLAND IMPACT (SF)	PERMANENT WETLAND IMPACT (SF)
A	II	100	300	360	3,515	80	1,775
B	III	80	150	-	4,360	-	5,245
D	IV	50	50	-	-	-	-
E	IV	50	50	-	-	-	-
OS-1	III	80	150	-	-	-	-
FALSE BAY CREEK	TYPE F	100	-	-	-	-	-
			TOTAL	360	7,875	80	7,020





E COLOGICAL NORTHWEST 	Mitigation Map	Figure 19
	Bailer Hill/Douglas Road Road Improvements Project Critical Areas Assessment & Mitigation Plan	July 2024

APPENDIX C: PHOTOGRAPHS



False Bay Creek and Wetland A – facing north from Bailer Hill Road.



False Bay Creek – facing south from Bailer Hill Road.



Wetland A - flooded by False Bay Creek.



Wetland A – seasonal ponding in pasture



Wetland B – within roadside ROW south of Bailer Hill Road



Wetland B – within roadside ROW north of Bailer Hill Road



Off-site extent of Wetland B – north of Bailer Hill Road



Overview of Wetland C



Wetland D – within roadside ROW south of Bailer Hill Road



Wetland E – from Bailer Hill Road facing south



Overview of Wetland OS-1



Off-site pond south of Bailer Hill Rd



Off-site pond east of Douglas Road



General overview of review area ROW along Bailer Hill Road



General overview of review area ROW along Douglas Road



Upland pasture within review area

APPENDIX D: DATA SHEETS

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/19/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 1
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): Local Relief (concave, convex, none): Subregion: LRR A
 Soil Map Unit Name: Haro-Hiddenridge-Rock Outcrop, 5 to 30 percent slopes NWL Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland C. Hydrophytic vegetation and wetland hydrology were met at this location. Soils did not meet hydric indicators, but soils appear disturbed. The area was determined to be wetland due to strong hydrologic and vegetative indicators, and best professional judgement.	

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet	
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	3
		-	<input type="checkbox"/>		(A)
		-	<input type="checkbox"/>	Total number of dominant species across all strata:	3
		-	<input type="checkbox"/>		(AB)
Total Cover:	0				
Sapling/Shrub Stratum (Plot size: 15 feet)				Percent of dominant species that or OBL, FACW, FAC:	
<i>Spiraea douglasii</i>	20	FACW	<input checked="" type="checkbox"/>		100
		-	<input type="checkbox"/>		(A/AB)
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	20				
Herb Stratum (Plot size: 5 feet)				FACU species:	x 4=
<i>Phalaris arundinacea</i>	100	FACW	<input checked="" type="checkbox"/>	UPL species: <td>x 5=</td>	x 5=
		-	<input type="checkbox"/>	Total:	(A) (B)
		-	<input type="checkbox"/>	Prevalence Index = B/A =	
		-	<input type="checkbox"/>	Hydrophytic Vegetation Indicators:	
		-	<input type="checkbox"/>	<input checked="" type="checkbox"/> Dominance Test is > 50%	
		-	<input type="checkbox"/>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
Total Cover:	100			<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹	
Woody Vine Stratum (Plot size: 30 feet)				¹ Indicators of hydric soil and wetland hydrology must be present.	
<i>Rubus armeniacus</i>	5	FAC	<input checked="" type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	5				
% Bare Ground in Herb Stratum: 0					
Remarks: The majority of dominant species observed at this location were hydrophytic.					
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					

SOIL

Sample Point: 1

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	10YR 2/1	100			-	-	loam	
11-16	10YR 2/1	50			-	-	silt loam	
	2.5Y 5/2	40	10YR 4/4	10	C	M		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red parent material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very shallow dark surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type:	
Depth (inches):	

Remarks: Soil at this location did not meet NRCS hydric soil indicators. However, soils appear disturbed.

HYDROLOGY

Wetland hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Water marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along living roots (C3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-season Water Table (C2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Frost-heave Hummocks (D7)	<input type="checkbox"/> FAC-neutral (D5)
Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -4	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 (include capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland hydrology indicators were observed at this location.	

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/19/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 2
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): Local Relief (concave, convex, none): Subregion: LRR A
 Soil Map Unit Name: Mitchellbay gravelly sandy loam, 5 to 15 percent slopes NWL Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland B (north of Bailer Hill Rd). Positive indicators for all three parameters were observed at this location.	

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet	
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	3
		-	<input type="checkbox"/>		(A)
		-	<input type="checkbox"/>	Total number of dominant species across all strata:	3
Total Cover:	0		<input type="checkbox"/>		(AB)
Sapling/Shrub Stratum (Plot size: 15 feet)				Percent of dominant species that or OBL, FACW, FAC:	100
		-	<input type="checkbox"/>		(A/AB)
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	0		<input type="checkbox"/>		
Herb Stratum (Plot size: 5 feet)				Prevalence Index worksheet	
<i>Phalaris arundinacea</i>	70	FACW	<input checked="" type="checkbox"/>	OBL species: x 1=	
<i>Festuca rubra</i>	30	FAC	<input checked="" type="checkbox"/>	FACW species: x 2=	
<i>Holcus lanatus</i>	10	FAC	<input type="checkbox"/>	FAC species: x 3=	
				FACU species: x 4=	
				UPL species: x 5=	
				Total: (A)	(B)
				Prevalence Index = B/A =	
				Hydrophytic Vegetation Indicators:	
				<input checked="" type="checkbox"/> Dominance Test is > 50%	
				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
				<input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
				<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹	
				¹ Indicators of hydric soil and wetland hydrology must be present.	
Total Cover:	110				
Woody Vine Stratum (Plot size: 30 feet)					
<i>Rubus armeniacus</i>	10	FAC	<input checked="" type="checkbox"/>		
Total Cover:	10				
% Bare Ground in Herb Stratum: 0					
Remarks: The majority of dominant species observed at this location were hydrophytic.					
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					

SOIL

Sample Point: 2

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 2/1	100			-	-	loam	
10-16	2.5Y 5/2	80	10YR 4/4	20	C	M	loamy sand	
					-	-		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red parent material (TF2) <input type="checkbox"/> Very shallow dark surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type:	
Depth (inches):	
Remarks: Soil at this location met NRCS hydric soil indicators.	

HYDROLOGY

Wetland hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along living roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Frost-heave Hummocks (D7) <input type="checkbox"/> FAC-neutral (D5)
Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -9	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -7 (include capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland hydrology indicators were observed at this location.	

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/19/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 3
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): Local Relief (concave, convex, none): Subregion: LRR A
 Soil Map Unit Name: Mitchellbay gravelly sandy loam, 5 to 15 percent slopes NWL Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Upland adjacent to Wetland B along roadside ditch. Hydrophytic vegetation and wetland hydrology indicators were observed at this location. However, hydric soil indicators were not met and the area was determined to be non-wetland. Hydrology is not anticipated to persist into the growing season.	

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet	
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	3
		-	<input type="checkbox"/>		(A)
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>	Total number of dominant species across all strata:	4
Total Cover:	0				(AB)
Sapling/Shrub Stratum (Plot size: 15 feet)				Percent of dominant species that are OBL, FACW, FAC:	75
<i>Symphoricarpos albus</i>	25	FACU	<input checked="" type="checkbox"/>		(A/AB)
<i>Rosa nutkana (cut)</i>	5	FAC	<input type="checkbox"/>		
<i>Crataegus monogyna</i>	2	FAC	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	27				
Herb Stratum (Plot size: 5 feet)				Prevalence Index worksheet	
<i>Festuca rubra</i>	60	FAC	<input checked="" type="checkbox"/>	OBL species: x 1=	
<i>Phalaris arundinacea</i>	40	FACW	<input checked="" type="checkbox"/>	FACW species: x 2=	
<i>Vicia sp.</i>	5	-	<input type="checkbox"/>	FAC species: x 3=	
		-	<input type="checkbox"/>	ACU species: x 4=	
		-	<input type="checkbox"/>	UPL species: x 5=	
		-	<input type="checkbox"/>	Total: (A)	(B)
		-	<input type="checkbox"/>	Prevalence Index = B/A =	
		-	<input type="checkbox"/>	Hydrophytic Vegetation Indicators:	
		-	<input type="checkbox"/>	<input checked="" type="checkbox"/> Dominance Test is > 50%	
		-	<input type="checkbox"/>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
		-	<input type="checkbox"/>	<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹	
		-	<input type="checkbox"/>	¹ Indicators of hydric soil and wetland hydrology must be present.	
Total Cover:	105				
Woody Vine Stratum (Plot size: 30 feet)					
<i>Rubus armeniacus</i>	30	FAC	<input checked="" type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	30				
% Bare Ground in Herb Stratum: 0					
Remarks: The majority of dominant species observed at this location were hydrophytic.					
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					

SOIL

Sample Point: 3

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10.5	10YR 2/1	100			-	-	loam	
10.5-16	10YR 4/2	95	10YR 3/3	5	C	M	loamy sand	concentrations are faint
					-	-		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	
Restrictive Layer (if present): Type: Depth (inches):		Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Soil at this location did not meet NRCS hydric soil indicators.		

HYDROLOGY

Wetland hydrology Indicators: Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along living roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Frost-heave Hummocks (D7) <input type="checkbox"/> FAC-neutral (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -8 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -7 (include capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Wetland hydrology indicators were observed at this location.		

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/19/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 4
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): Local Relief (concave, convex, none): Subregion: LRR A
 Soil Map Unit Name: Mitchellbay gravelly sandy loam, 0 to 5 percent slopes NWL Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland B (south of Bailer Hill Rd). Positive indicators for all three parameters were observed at this location.	

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet	
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	3
		-	<input type="checkbox"/>		(A)
		-	<input type="checkbox"/>		3
		-	<input type="checkbox"/>	Total number of dominant species across all strata:	(AB)
Total Cover:	0				
Sapling/Shrub Stratum (Plot size: 15 feet)	Percent of dominant species that or OBL, FACW, FAC:				100
<i>Crataegus monogyna</i>	30	FAC	<input checked="" type="checkbox"/>		
<i>Rosa nutkana</i>	5	FAC	<input type="checkbox"/>		(A/AB)
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	35				
Herb Stratum (Plot size: 5 feet)	Prevalence Index worksheet				
			<input type="checkbox"/>	OBL species: x 1=	
			<input type="checkbox"/>	FACW species: x 2=	
			<input type="checkbox"/>	FAC species: x 3=	
			<input type="checkbox"/>	FACU species: x 4=	
<i>Phalaris arundinacea</i>	70	FACW	<input checked="" type="checkbox"/>	UPL species: x 5=	
<i>Carex obnupta</i>	25	OBL	<input checked="" type="checkbox"/>	Total: (A)	(B)
<i>Urtica dioica</i>	5	FAC	<input type="checkbox"/>	Prevalence Index = B/A =	
		-	<input type="checkbox"/>	Hydrophytic Vegetation Indicators:	
		-	<input type="checkbox"/>	<input checked="" type="checkbox"/> Dominance Test is > 50%	
		-	<input type="checkbox"/>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
		-	<input type="checkbox"/>	<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹	
Total Cover:	100			¹ Indicators of hydric soil and wetland hydrology must be present.	
% Bare Ground in Herb Stratum: 0	0			Hydrophytic Vegetation Present?	
Remarks: The majority of dominant species observed at this location were hydrophytic.					Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

SOIL

Sample Point: 4

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	10YR 2/1	100			-	-	loam	
15-18+	2.5Y 5/2	80	10YR 4/6	20	C	M	loamy sand	
					-	-		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input checked="" type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red parent material (TF2) <input type="checkbox"/> Very shallow dark surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
Restrictive Layer (if present): Type: Depth (inches):		Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Soil at this location met NRCS hydric soil indicators.		

HYDROLOGY

Wetland hydrology Indicators: Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along living roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Frost-heave Hummocks (D7) <input type="checkbox"/> FAC-neutral (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -7 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -6 (include capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Wetland hydrology indicators were observed at this location.		

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/19/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 5
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): _____ Local Relief (concave, convex, none): _____ Subregion: LRR A
 Soil Map Unit Name: Coveland loam, 0 to 5 percent slopes NWL Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland A. Positive indicators for all three parameters were observed at this location.	

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet	
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	2
		-	<input type="checkbox"/>		(A)
		-	<input type="checkbox"/>	Total number of dominant species across all strata:	2
Total Cover:	0		<input type="checkbox"/>		(AB)
Sapling/Shrub Stratum (Plot size: 15 feet)		-	<input type="checkbox"/>	Percent of dominant species that are OBL, FACW, FAC:	100
		-	<input type="checkbox"/>		(A/AB)
		-	<input type="checkbox"/>	Prevalence Index worksheet	
		-	<input type="checkbox"/>	OBL species: x 1=	
		-	<input type="checkbox"/>	FACW species: x 2=	
		-	<input type="checkbox"/>	FAC species: x 3=	
Total Cover:	0		<input type="checkbox"/>	FACU species: x 4=	
Herb Stratum (Plot size: 5 feet)				UPL species: x 5=	
<i>Phalaris arundinacea</i>	60	FACW	<input checked="" type="checkbox"/>	Total: (A)	(B)
<i>Schedonorus arundinaceus</i>	40	FAC	<input checked="" type="checkbox"/>	Prevalence Index = B/A =	
		-	<input type="checkbox"/>	Hydrophytic Vegetation Indicators:	
		-	<input type="checkbox"/>	<input checked="" type="checkbox"/> Dominance Test is > 50%	
		-	<input type="checkbox"/>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
Total Cover:	100		<input type="checkbox"/>	<input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
Woody Vine Stratum (Plot size: 30 feet)		-	<input type="checkbox"/>	<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹	
Total Cover:	0		<input type="checkbox"/>	¹ Indicators of hydric soil and wetland hydrology must be present.	
% Bare Ground in Herb Stratum: 0					
Remarks: The majority of dominant species observed at this location were hydrophytic.					
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					

SOIL

Sample Point: 5

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	10YR 2/1	100			-	-	silt loam	
11-16	10YR 5/2	95	10YR 4/4	5	C	M	clay loam	
					-	-		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red parent material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very shallow dark surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	
Restrictive Layer (if present):		Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____		
Depth (inches): _____		
Remarks: Soil at this location met NRCS hydric soil indicators.		

HYDROLOGY

Wetland hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-season Water Table (C2)
<input type="checkbox"/> Water marks (B1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Frost-heave Hummocks (D7)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-neutral (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along living roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	
Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -9	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -8 (include capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland hydrology indicators were observed at this location.	

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/19/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 6
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): _____ Local Relief (concave, convex, none): convex Subregion: LRR A
 Soil Map Unit Name: _____ NWI Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: <u>Wetland A. Wetland hydrology confirmed in March 2024.</u>		

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet	
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	1
		-	<input type="checkbox"/>		(A)
		-	<input type="checkbox"/>		1
		-	<input type="checkbox"/>	Total number of dominant species across all strata:	(AB)
Total Cover:	0				
Sapling/Shrub Stratum (Plot size: 15 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Prevalence Index worksheet	
		-	<input type="checkbox"/>	Percent of dominant species that are OBL, FACW, FAC:	100
		-	<input type="checkbox"/>		(A/AB)
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	0				
Herb Stratum (Plot size: 5 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Prevalence Index worksheet	
<i>Schedonorus arundinaceus</i>	80	FAC	<input checked="" type="checkbox"/>	OBL species: x 1=	
<i>Festuca rubra</i>	20	FAC	<input type="checkbox"/>	FACW species: x 2=	
<i>Trifolium sp.</i>	10	-	<input type="checkbox"/>	FAC species: x 3=	
<i>Cynosurus cristatus</i>	10	FACU	<input type="checkbox"/>	FACU species: x 4=	
<i>Phalaris arundinacea</i>	5	FACW	<input type="checkbox"/>	UPL species: x 5=	
<i>Geranium sp.</i>	2	-	<input type="checkbox"/>	Total: (A)	(B)
<i>Ranunculus repens</i>	2	FAC	<input type="checkbox"/>	Prevalence Index = B/A =	
Total Cover:	129				
Woody Vine Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Hydrophytic Vegetation Indicators:	
		-	<input type="checkbox"/>	<input checked="" type="checkbox"/> Dominance Test is > 50%	
		-	<input type="checkbox"/>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
		-	<input type="checkbox"/>	<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹	
		-	<input type="checkbox"/>	¹ Indicators of hydric soil and wetland hydrology must be present.	
Total Cover:	0				
% Bare Ground in Herb Stratum: 0					
Remarks: <u>The majority of dominant species observed at this location were hydrophytic.</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

SOIL

Sample Point: 6

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 2/1	100			-	-	silt loam	
9-16	10Y 5/1	93	10YR 5/6	7	C	RC	clay	
					-	-		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Hydrogen Sulfide (A4) <input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red parent material (TF2) <input type="checkbox"/> Very shallow dark surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
Restrictive Layer (if present): Type: _____ Depth (inches): _____	
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: <u>Soil at this location met NRCS hydric soil indicators.</u>	

HYDROLOGY

Wetland hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Oxidized Rhizospheres along living roots (C3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Frost-heave Hummocks (D7) <input type="checkbox"/> FAC-neutral (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -2 (include capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <u>Hydrology confirmed in April 2024</u>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/19/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 7
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): Local Relief (concave, convex, none): Subregion: LRR A
 Soil Map Unit Name: Coveland loam, 0 to 5 percent slopes NWL Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland A. Vegetation indicator dominance was unable to be determined at this location. However, hydric soils and wetland hydrology indicators were met at this location and the area was determined to be wetland.	

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet	
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	?
		-	<input type="checkbox"/>		(A)
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>	Total number of dominant species across all strata:	1 (AB)
Total Cover:	0				
Sapling/Shrub Stratum (Plot size: 15 feet)		-	<input type="checkbox"/>	Percent of dominant species that or OBL, FACW, FAC:	?
		-	<input type="checkbox"/>		(A/AB)
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	0				
Herb Stratum (Plot size: 5 feet)				Prevalence Index worksheet	
<i>Poa sp.</i>	80	-	<input checked="" type="checkbox"/>	OBL species: x 1=	
<i>Festuca rubra</i>	20	FAC	<input type="checkbox"/>	FACW species: x 2=	
<i>Phalaris arundinacea</i>	10	FACW	<input type="checkbox"/>	FAC species: x 3=	
		-	<input type="checkbox"/>	FACU species: x 4=	
		-	<input type="checkbox"/>	UPL species: x 5=	
		-	<input type="checkbox"/>	Total: (A)	(B)
		-	<input type="checkbox"/>	Prevalence Index = B/A =	
		-	<input type="checkbox"/>	Hydrophytic Vegetation Indicators:	
		-	<input type="checkbox"/>	<input type="checkbox"/> Dominance Test is > 50%	
		-	<input type="checkbox"/>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
		-	<input type="checkbox"/>	<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ⁴	
		-	<input type="checkbox"/>	⁴ Indicators of hydric soil and wetland hydrology must be present.	
Total Cover:	110				
Woody Vine Stratum (Plot size: 30 feet)		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	0				
% Bare Ground in Herb Stratum: 0				Hydrophytic Vegetation Present?	
Remarks: Vegetation indicator dominance was unable to be determined at this location due to the unknown species of <i>Poa</i> grass.				Yes <input type="checkbox"/> No <input type="checkbox"/>	

SOIL

Sample Point: 7

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 2/1	100			-	-	silt loam	
9-16	10Y 6/2	90	10YR 4/6	10	C	RC	clay	
					-	-		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
	<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red parent material (TF2) <input type="checkbox"/> Very shallow dark surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
Restrictive Layer (if present): Type: compacted clay Depth (inches): -9	
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Soil at this location met NRCS hydric soil indicators.	

HYDROLOGY

Wetland hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along living roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Frost-heave Hummocks (D7) <input type="checkbox"/> FAC-neutral (D5)
Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -5	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 (include capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland hydrology indicators were observed at this location.	

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd	City/County: San Juan County	Sample Date: 12/20/2023
Applicant/Owner: San Juan County Public Works	State: WA	Sample Point: 9
Investigator: C. Van Slyke, C. Trusty	Section/Township/Range: 27 & 28/35N/03W	
Landform (hillslope, terrace, etc):	Local Relief (concave, convex, none):	Subregion: LRR A
Soil Map Unit Name: Coveland loam, 0 to 5 percent slopes		NWI Classification: none
Are climatic/hydrologic conditions on the site typical of this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (if no, explain in Remarks)		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Upland adjacent to Wetland OS-1. Hydrophytic vegetation was observed at this location. However, soils are not hydric and wetland hydrology indicators were not met. Therefore, the area was determined to be non-wetland.		

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet	
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	2
		-	<input type="checkbox"/>		(A)
		-	<input type="checkbox"/>		2
Total Cover:	0			Total number of dominant species across all strata:	(AB)
Sapling/Shrub Stratum (Plot size: 15 feet)				Percent of dominant species that are OBL, FACW, FAC:	100
<i>Rosa nutkana</i>	15	FAC	<input checked="" type="checkbox"/>		(A/AB)
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	15				
Herb Stratum (Plot size: 5 feet)					
<i>Phalaris arundinacea</i>	100	FACW	<input checked="" type="checkbox"/>	FACU species: x 4=	
		-	<input type="checkbox"/>	UPL species: x 5=	
		-	<input type="checkbox"/>	Total: (A) (B)	
		-	<input type="checkbox"/>	Prevalence Index = B/A =	
		-	<input type="checkbox"/>	Hydrophytic Vegetation Indicators:	
		-	<input type="checkbox"/>	<input checked="" type="checkbox"/> Dominance Test is > 50%	
		-	<input type="checkbox"/>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
		-	<input type="checkbox"/>	<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ⁴	
Total Cover:	100			⁴ Indicators of hydric soil and wetland hydrology must be present.	
% Bare Ground in Herb Stratum: 0					
Remarks: The majority of dominant species observed at this location were hydrophytic.					Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

SOIL

Sample Point: 9

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	10YR 2/1	100			-	-	loam	
					-	-		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
	<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red parent material (TF2) <input type="checkbox"/> Very shallow dark surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
Restrictive Layer (if present): Type: Depth (inches):	
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Soil at this location did not meet NRCS hydric soil indicators.	

HYDROLOGY

Wetland hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along living roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Frost-heave Hummocks (D7) <input type="checkbox"/> FAC-neutral (D5)
Field Observations:	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -15 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -14 (include capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland hydrology indicators were not met at this location.	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/20/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 10
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): _____ Local Relief (concave, convex, none): _____ Subregion: LRR A
 Soil Map Unit Name: Coveland loam, 0 to 5 percent slopes NWI Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland D. Positive indicators for all three parameters were observed at this location.	

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet	
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	1
		-	<input type="checkbox"/>		(A)
		-	<input type="checkbox"/>	Total number of dominant species across all strata:	1
Total Cover:	0		<input type="checkbox"/>		(AB)
Sapling/Shrub Stratum (Plot size: 15 feet)				Percent of dominant species that are OBL, FACW, FAC:	100
		-	<input type="checkbox"/>		(A/AB)
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	0		<input type="checkbox"/>		
Herb Stratum (Plot size: 5 feet)				Prevalence Index worksheet	
<i>Phalaris arundinacea</i>	100	FACW	<input checked="" type="checkbox"/>	OBL species: x 1=	
		-	<input type="checkbox"/>	FACW species: x 2=	
		-	<input type="checkbox"/>	FAC species: x 3=	
		-	<input type="checkbox"/>	FACU species: x 4=	
		-	<input type="checkbox"/>	UPL species: x 5=	
Total Cover:	100		<input type="checkbox"/>	Total: (A)	(B)
		-	<input type="checkbox"/>	Prevalence Index = B/A =	
		-	<input type="checkbox"/>	Hydrophytic Vegetation Indicators:	
		-	<input type="checkbox"/>	<input checked="" type="checkbox"/> Dominance Test is > 50%	
		-	<input type="checkbox"/>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
		-	<input type="checkbox"/>	<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹	
Total Cover:	0		<input type="checkbox"/>	¹ Indicators of hydric soil and wetland hydrology must be present.	
% Bare Ground in Herb Stratum: 0				Hydrophytic Vegetation Present?	
Remarks: The majority of dominant species observed at this location were hydrophytic.				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

SOIL

Sample Point: 10

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	10YR 2/1	100			-	-	silt loam	
11-16+	10Y 6/1	85	10YR 4/6	15	C	M	clay	
					-	-		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
Restrictive Layer (if present): Type: _____ Depth (inches): _____	
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Soil at this location met NRCS hydric soil indicators.	

HYDROLOGY

Wetland hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along living roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Frost-heave Hummocks (D7) <input type="checkbox"/> FAC-neutral (D5)	
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -3 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 (include capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland hydrology indicators were observed at this location.	

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/20/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 11
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): Local Relief (concave, convex, none): Subregion: LRR A
 Soil Map Unit Name: Coveland loam, 0 to 5 percent slopes NWL Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Upland adjacent to Wetland D. Hydric soils were observed at this location, however, wetland hydrology was not observed. Vegetation indicator dominance was not able to be determined as the species of grass that dominated in the location is unknown.	

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet	
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	1+
		-	<input type="checkbox"/>		(A)
		-	<input type="checkbox"/>		2
Total Cover:	0			Total number of dominant species across all strata:	(AB)
Sapling/Shrub Stratum (Plot size: 15 feet)				Percent of dominant species that or OBL, FACW, FAC:	50+
<i>Crataegus monogyna</i>	20	FAC	<input checked="" type="checkbox"/>		(A/AB)
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	20				
Herb Stratum (Plot size: 5 feet)					
<i>Unknown grass</i>	90	-	<input checked="" type="checkbox"/>	OBL species: x 1=	
<i>Poa sp.</i>	10	-	<input type="checkbox"/>	FACW species: x 2=	
		-	<input type="checkbox"/>	FAC species: x 3=	
		-	<input type="checkbox"/>	FACU species: x 4=	
		-	<input type="checkbox"/>	UPL species: x 5=	
		-	<input type="checkbox"/>	Total: (A) (B)	
		-	<input type="checkbox"/>	Prevalence Index = B/A =	
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	100				
Woody Vine Stratum (Plot size: 30 feet)					
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	0				
% Bare Ground in Herb Stratum: 0				Remarks: Vegetation indicator dominance was unable to be determined due to the unknown species of grass that dominated.	
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	

SOIL

Sample Point: 11

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 2/1	100			-	-	loam	
10-16	10Y 6/1	85	10YR 4/6	15	C	M	clay loam	
					-	-		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red parent material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very shallow dark surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	
Restrictive Layer (if present):		Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type:		
Depth (inches):		
Remarks: Soil at this location met NRCS hydric soil indicators.		

HYDROLOGY

Wetland hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Water marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along living roots (C3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): (include capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: No wetland hydrology indicators were observed at this location.	

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/20/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 12
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): Local Relief (concave, convex, none): Subregion: LRR A
 Soil Map Unit Name: Coveland loam, 0 to 5 percent slopes NWL Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland E. Positive indicators for all three parameters were observed at this location.	

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet	
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	6
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	0			Total number of dominant species across all strata:	6 (AB)
Sapling/Shrub Stratum (Plot size: 15 feet)				Percent of dominant species that or OBL, FACW, FAC:	100
<i>Crataegus monogyna</i>	20	FAC	<input checked="" type="checkbox"/>		100 (A/AB)
<i>Crataegus douglasii</i>	10	FAC	<input checked="" type="checkbox"/>		
<i>Rosa nutkana</i>	10	FAC	<input checked="" type="checkbox"/>		
<i>Symphoricarpos albus</i>	5	FACU	<input type="checkbox"/>		
Total Cover:	45				
Herb Stratum (Plot size: 5 feet)				Prevalence Index worksheet	
<i>Agrostis sp.</i>	50	FAC	<input checked="" type="checkbox"/>	OBL species: x 1=	
<i>Festuca rubra</i>	20	FAC	<input checked="" type="checkbox"/>	FACW species: x 2=	
<i>Schedonorus arundinaceus</i>	20	FAC	<input checked="" type="checkbox"/>	FAC species: x 3=	
<i>Rubus ursinus</i>	5	FACU	<input type="checkbox"/>	FACU species: x 4=	
		-	<input type="checkbox"/>	UPL species: x 5=	
Total Cover:	95			Total: (A) (B)	
				Prevalence Index = B/A =	
				Hydrophytic Vegetation Indicators:	
				<input checked="" type="checkbox"/> Dominance Test is > 50%	
				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
				<input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
				<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹	
				¹ Indicators of hydric soil and wetland hydrology must be present.	
				Hydrophytic Vegetation Present?	
				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
				% Bare Ground in Herb Stratum: 5	
Remarks: The majority of dominant species observed at this location were hydrophytic.					

SOIL

Sample Point: 12

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-13	10YR 2/1	100			-	-	gravelly loam	
13-16	10YR 4/1	80	7.5YR 4/4	20	C	M	clay loam	
					-	-		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input checked="" type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red parent material (TF2) <input type="checkbox"/> Very shallow dark surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
Restrictive Layer (if present): Type: Depth (inches):		Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Soil at this location met NRCS hydric soil indicators.		

HYDROLOGY

Wetland hydrology Indicators: Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along living roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Frost-heave Hummocks (D7) <input type="checkbox"/> FAC-neutral (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -1 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 (include capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Wetland hydrology indicators were observed at this location.		

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/20/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 13
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): _____ Local Relief (concave, convex, none): _____ Subregion: LRR A
 Soil Map Unit Name: Coveland loam, 0 to 5 percent slopes NWL Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Upland adjacent to Wetland E. This location does not meet wetland parameters.		

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet		
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	2	
		-	<input type="checkbox"/>		(A)	
		-	<input type="checkbox"/>		Total number of dominant species across all strata:	4
		-	<input type="checkbox"/>			(AB)
Total Cover:	0					
Sapling/Shrub Stratum (Plot size: 15 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet		
<i>Crataegus monogyna</i>	20	FAC	<input checked="" type="checkbox"/>	Percent of dominant species that or OBL, FACW, FAC:	50	
<i>Symphoricarpos albus</i>	10	FACU	<input checked="" type="checkbox"/>		(A/AB)	
		-	<input type="checkbox"/>	Prevalence Index worksheet		
		-	<input type="checkbox"/>		OBL species: x 1=	
		-	<input type="checkbox"/>		FACW species: x 2=	
				FAC species: x 3=		
				FACU species: x 4=		
				UPL species: x 5=		
				Total: (A)	(B)	
				Prevalence Index = B/A =		
Herb Stratum (Plot size: 5 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Hydrophytic Vegetation Indicators:		
<i>Anthoxanthum odoratum</i>	50	FACU	<input checked="" type="checkbox"/>	<input type="checkbox"/> Dominance Test is > 50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ ¹ Indicators of hydric soil and wetland hydrology must be present.		
<i>Agrostis sp.</i>	20	FAC	<input checked="" type="checkbox"/>			
<i>Rubus ursinus</i>	10	FACU	<input type="checkbox"/>			
<i>Schedonorus arundinaceus</i>	10	FAC	<input type="checkbox"/>			
		-	<input type="checkbox"/>			
		-	<input type="checkbox"/>			
Total Cover:	90					
Woody Vine Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Hydrophytic Vegetation Indicators:		
		-	<input type="checkbox"/>	<input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ ¹ Indicators of hydric soil and wetland hydrology must be present.		
		-	<input type="checkbox"/>			
		-	<input type="checkbox"/>			
Total Cover:	0					
% Bare Ground in Herb Stratum: 0 (20% moss cover)						
Remarks: Hydrophytic vegetation did not dominate in this location.				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

SOIL

Sample Point: 13

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/2	100			-	-	loam	charcoal mixed in
8-16	2.5Y 5/3	40	10Y 6/1	30	D	M	clay loam	
			10YR 4/6	30	C	M		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
	<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red parent material (TF2) <input type="checkbox"/> Very shallow dark surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
Restrictive Layer (if present): Type: _____ Depth (inches): _____	
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Soil at this location did not meet NRCS hydric soil indicators.	

HYDROLOGY

Wetland hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along living roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Frost-heave Hummocks (D7) <input type="checkbox"/> FAC-neutral (D5)
Field Observations:	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (include capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: No wetland hydrology indicators were observed at this location.	

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/20/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 14
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): Local Relief (concave, convex, none): Subregion: LRR A
 Soil Map Unit Name: Coveland loam, 0 to 5 percent slopes NWL Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Upland adjacent to Wetland A. Hydric soil and wetland hydrology indicators were not met at this location. Vegetation indicator dominance was unable to be determined.	

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet	
		-	<input type="checkbox"/>	Number of Dominant Species that are OBL, FACW, or FAC:	1+
		-	<input type="checkbox"/>		(A)
		-	<input type="checkbox"/>		2
Total Cover:	0			Total number of dominant species across all strata:	(AB)
Sapling/Shrub Stratum (Plot size: 15 feet)		-	<input type="checkbox"/>	Percent of dominant species that or OBL, FACW, FAC:	50+
		-	<input type="checkbox"/>		(A/AB)
		-	<input type="checkbox"/>		
Total Cover:	0				
Herb Stratum (Plot size: 5 feet)				Prevalence Index worksheet	
<i>Poa sp.</i>	50	-	<input checked="" type="checkbox"/>	OBL species: x 1=	
<i>Schedonorus arundinaceus</i>	50	FAC	<input checked="" type="checkbox"/>	FACW species: x 2=	
<i>Ranunculus repens</i>	5	FAC	<input type="checkbox"/>	FAC species: x 3=	
<i>Rumex sp.</i>	1	-	<input type="checkbox"/>	FACU species: x 4=	
<i>Vicia sp.</i>	1	-	<input type="checkbox"/>	UPL species: x 5=	
Total Cover:	107			Total: (A) (B)	
				Prevalence Index = B/A =	
Woody Vine Stratum (Plot size: 30 feet)				Hydrophytic Vegetation Indicators:	
		-	<input type="checkbox"/>	<input type="checkbox"/> Dominance Test is > 50%	
		-	<input type="checkbox"/>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
		-	<input type="checkbox"/>	<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
		-	<input type="checkbox"/>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ⁴	
Total Cover:	0			⁴ Indicators of hydric soil and wetland hydrology must be present.	
% Bare Ground in Herb Stratum: 0				Hydrophytic Vegetation Present?	
Remarks: Vegetation indicator dominance was unable to be determined at this location due to the unknown species of <i>Poa</i> grass.				Yes <input type="checkbox"/> No <input type="checkbox"/>	

SOIL

Sample Point: 14

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	10YR 2/1	95			-	-	silt loam	
0-20	10YR 5/2	4	10YR 4/6	1	C	M	clay	Inclusion within the matrix
					-	-		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red parent material (TF2) <input type="checkbox"/> Very shallow dark surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)	
³ Indicators of hydrophytic vegetation and wetland hydrology must be present.	
Restrictive Layer (if present):	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type:	
Depth (inches):	
Remarks: Soil at this location does not meet NRCS hydric soil indicators.	

HYDROLOGY

Wetland hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along living roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Frost-heave Hummocks (D7) <input type="checkbox"/> FAC-neutral (D5)
Field Observations:	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches):	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): (include capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: No wetland hydrology indicators were observed at this location.	

WETLAND DETERMINATION DATA FORM – Western Mountain, Valley Coast Region

Project Site: Bailer Hill Rd/ Douglas Rd City/County: San Juan County Sample Date: 12/20/2023
 Applicant/Owner: San Juan County Public Works State: WA Sample Point: 15
 Investigator: C. Van Slyke, C. Trusty Section/Township/Range: 27 & 28/35N/03W
 Landform (hillslope, terrace, etc): Coveland loam, 0 to 5 Local Relief (concave, convex, none): Subregion: LRR A
 percent slopes
 Soil Map Unit Name: NWI Classification: none
 Are climatic/hydrologic conditions on the site typical of this time of year? Yes No (if no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland A. Positive indicators for all three parameters were observed at this location.	

VEGETATION

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Indicator Status	Dominant Species?	Dominance Test worksheet Number of Dominant Species that are OBL, FACW, or FAC:	
		-	<input type="checkbox"/>		2
		-	<input type="checkbox"/>		(A)
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	0			Total number of dominant species across all strata:	2 (AB)
Sapling/Shrub Stratum (Plot size: 15 feet)				Percent of dominant species that or OBL, FACW, FAC:	100 (A/AB)
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	0				
Herb Stratum (Plot size: 5 feet)					
<i>Schedonorus arundinaceus</i>	60	FAC	<input checked="" type="checkbox"/>	OBL species: x 1=	
<i>Agrostis sp.</i>	40	FAC	<input checked="" type="checkbox"/>	FACW species: x 2=	
<i>Festuca rubra</i>	20	FAC	<input type="checkbox"/>	FAC species: x 3=	
				FACU species: x 4=	
				UPL species: x 5=	
				Total: (A) (B)	
				Prevalence Index = B/A =	
				Hydrophytic Vegetation Indicators:	
				<input checked="" type="checkbox"/> Dominance Test is > 50%	
				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
				<input type="checkbox"/> Morphological Adaptations ¹ (provide supporting data in Remarks or on a separate sheet)	
				<input type="checkbox"/> Wetland Non-Vascular Plants ¹	
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ⁴	
				⁴ Indicators of hydric soil and wetland hydrology must be present.	
Total Cover:	120				
Woody Vine Stratum (Plot size: 30 feet)					
		-	<input type="checkbox"/>		
		-	<input type="checkbox"/>		
Total Cover:	0				
% Bare Ground in Herb Stratum: 0				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: The majority of dominant species observed at this location were hydrophytic.					

SOIL

Sample Point: 15

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

Depth (inches)	Soil Color		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	10YR 2/1	100			-	-	silt loam	
11-16	10Y 6/2	90	10YR 4/6	10	C	M	clay	
					-	-		
					-	-		
					-	-		
					-	-		

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

Hydric Soil Indicators: (applicable to all LRRs unless otherwise noted)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)
	<input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red parent material (TF2) <input type="checkbox"/> Very shallow dark surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)

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

Restrictive Layer (if present): Type: Depth (inches):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: Soil at this location met NRCS hydric soil indicators.

HYDROLOGY

Wetland hydrology Indicators: Primary Indicators (any one indicator is sufficient)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Water-stained Leaves (B9) (except MLRA 1, 2, 4A and 4B) <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along living roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Stunted or Stresses Plants (D1) (LRR A) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water-stained (B9) (MLRA 1, 2, 4A, and 4B) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-season Water Table (C2) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Frost-heave Hummocks (D7) <input type="checkbox"/> FAC-neutral (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -5 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): -3 (include capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Wetland hydrology indicators were observed at this location.	

APPENDIX E: ECOLOGY RATING FORMS

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 12/19/23
 Rated by Collin Van Slyke, Candace Trusty Trained by Ecology? Yes No Date of training: 2021, 2020

HGM Class used for rating Depressional Wetland has multiple HGM classes? Yes No

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

Source of base aerial photo/map San Juan County 2023

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

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 - 27

Category II – Total score = 20 - 22

Category III – Total score = 16 - 19

Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat
Site Potential	HO M ⊙ LO	HO MO L ⊙ HO MO LO	HO MO LO
Landscape Potential	HO M ⊙ LO	HO M ⊙ LO	HO MO LO
Value	H ⊙ MO LO	HO MO LO	HO MO LO
Score Based on Ratings	7	6	7
TOTAL			20

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	<input checked="" type="checkbox"/>

Wetland Rating System for Western WA: 2014 Update
 Rating Form – Version 2, July 2023

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	A1
Hydroperiods	D 1.4, H 1.2	B2
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	B2
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	A1
Map of the contributing basin	D 4.3, D 5.3	B1
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C1
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	D
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	D

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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	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 Rating System for Western WA: 2014 Update
 Rating Form – Version 2, July 2023

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.

- Are the water levels in the entire unit usually controlled by tides except during floods?
NO - go to 2
YES - the wetland class is **Tidal Fringe** - go to 1.1
1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?
NO - Saltwater Tidal Fringe (Estuarine)
If your wetland can be classified as a Freshwater Tidal Fringe use the forms for Riverine wetlands. If it is Saltwater Tidal Fringe it is an Estuarine wetland and is not scored. This method cannot be used to score functions for estuarine wetlands.
YES - Freshwater Tidal Fringe
- 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.
- 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)
- Does the entire wetland unit **meet all** of the following criteria?
 The wetland is on a slope (*slope can be very gradual*).
 The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
 The water leaves the wetland **without being impounded**.
NO - go to 5
 YES - The wetland class is **Slope**
- 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).
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).
- Does the entire wetland unit **meet all** of the following criteria?
 The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
 The overbank flooding occurs at least once every 2 years.

Wetland name or number A

NO - go to 6

YES - The wetland class is **Riverine**
NOTE: The Riverine unit can contain depressions that are filled with water when the river is not flooding

- 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**
- 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**
- 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). Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. Wetland has an unconfined, or slightly constricted, surface outlet that is permanently flowing.	1 points = 3 points = 2 points = 1 points = 1
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use WPCS 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 Wetland has persistent, ungrazed, plants > 1/2 of area Wetland has persistent, ungrazed plants > 1/10 of area Wetland has persistent, ungrazed plants < 1/10 of area	1 points = 5 points = 3 points = 1 points = 0
D 1.4. Characteristics of seasonal ponding or inundation: <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > 1/2 total area of wetland Area seasonally ponded is > 1/4 total area of wetland Area seasonally ponded is < 1/4 total area of wetland	4 points = 4 points = 2 points = 0
Total for D 1	10 Add the points in the boxes above

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

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

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

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	1 Yes = 1 No = 0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	1 Yes = 1 No = 0
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.)	0 Yes = 2 No = 0
Total for D 3	2 Add the points in the boxes above

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

D 4.0. Does the site have the potential to improve water quality?	
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). Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet. Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. Wetland has an unconfined, or slightly constricted, surface outlet that is permanently flowing.	1 points = 3 points = 2 points = 1 points = 1
D 4.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use WPCS definitions). Yes = 4. No = 0	4
D 4.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area Wetland has persistent, ungrazed, plants > 1/2 of area Wetland has persistent, ungrazed plants > 1/10 of area Wetland has persistent, ungrazed plants < 1/10 of area	1 points = 5 points = 3 points = 1 points = 0
D 4.4. Characteristics of seasonal ponding or inundation: <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > 1/2 total area of wetland Area seasonally ponded is > 1/4 total area of wetland Area seasonally ponded is < 1/4 total area of wetland	4 points = 4 points = 2 points = 0
Total for D 4	10 Add the points in the boxes above

Rating of Site Potential If score is: 12-16 = H X 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?	0 Yes = 1 No = 0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	1 Yes = 1 No = 0
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.)?	0 Yes = 1 No = 0
Total for D 5	1 Add the points in the boxes above

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. 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 down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):	2 points = 2 points = 1 points = 1
• Flooding occurs in a sub-basin that is immediately down-gradient of unit.	
• Surface flooding problems are in a sub-basin farther down-gradient.	
• Flooding from groundwater is an issue in the sub-basin.	
• The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____	
• There are no problems with flooding downstream of the wetland.	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	0 Yes = 2 No = 0
Total for D 6	2 Add the points in the boxes above

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

D 6.0. Does the site have the potential to reduce flooding and erosion?	
D 6.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet). Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet. Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. Wetland has an unconfined, or slightly constricted, surface outlet that is permanently flowing.	0 points = 4 points = 2 points = 1 points = 0
D 6.2. 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 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet The wetland is a "headwater" wetland Wetland is flat but has small depressions on the surface that trap water Marks of ponding less than 0.5 ft (6 in)	3 points = 7 points = 5 points = 3 points = 3 points = 1 points = 0
D 6.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the wetland unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire wetland is in the Flats class	0 points = 5 points = 3 points = 0 points = 5
Total for D 6	3 Add the points in the boxes above

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). Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet. Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. Wetland has an unconfined, or slightly constricted, surface outlet that is permanently flowing.	0 points = 4 points = 2 points = 1 points = 0
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 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet The wetland is a "headwater" wetland Wetland is flat but has small depressions on the surface that trap water Marks of ponding less than 0.5 ft (6 in)	3 points = 7 points = 5 points = 3 points = 3 points = 1 points = 0
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the wetland unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire wetland is in the Flats class	0 points = 5 points = 3 points = 0 points = 5
Total for D 4	3 Add the points in the boxes above

Rating of Site Potential If score is: 12-16 = H X 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?	0 Yes = 1 No = 0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	1 Yes = 1 No = 0
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.)?	0 Yes = 1 No = 0
Total for D 5	1 Add the points in the boxes above


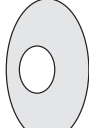

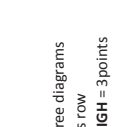
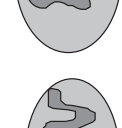
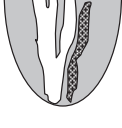
Rating of Landscape Potential If score is: 3 = H X 1 or 2 = M 0 = L Record the rating on the first page

D 6.0. Are the hydrologic functions provided by the site valuable to society?	
D 6.1. 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 down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):	2 points = 2 points = 1 points = 1
• Flooding occurs in a sub-basin that is immediately down-gradient of unit.	
• Surface flooding problems are in a sub-basin farther down-gradient.	
• Flooding from groundwater is an issue in the sub-basin.	
• The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____	
• There are no problems with flooding downstream of the wetland.	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	0 Yes = 2 No = 0
Total for D 6	2 Add the points in the boxes above

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

D 6.0. Does the site have the potential to reduce flooding and erosion?	
D 6.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet). Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet. Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. Wetland has an unconfined, or slightly constricted, surface outlet that is permanently flowing.	0 points = 4 points = 2 points = 1 points = 0
D 6.2. 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 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet The wetland is a "headwater" wetland Wetland is flat but has small depressions on the surface that trap water Marks of ponding less than 0.5 ft (6 in)	3 points = 7 points = 5 points = 3 points = 3 points = 1 points = 0
D 6.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the wetland unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire wetland is in the Flats class	0 points = 5 points = 3 points = 0 points = 5
Total for D 6	3 Add the points in the boxes above

Wetland name or number: A

<p>HABITAT FUNCTIONS - Indicators that site functions to provide important habitat</p>		
H 1.0. Does the site have the potential to provide habitat?	1	
H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class.</i> 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. <input type="checkbox"/> Aquatic bed <input checked="" type="checkbox"/> Emergent <input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) <input type="checkbox"/> Forested (areas where trees have > 30% cover) <i>If the unit has a Forested class, check if:</i> <input type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	3 structures: points = 4 2 structures: points = 2 1 structure: points = 0	
H 1.2. Hydroperiods: Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland 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). <input type="checkbox"/> Permanently flooded or inundated <input checked="" type="checkbox"/> Seasonally flooded or inundated <input type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Saturated only <input checked="" type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake Fringe wetland <input type="checkbox"/> Freshwater tidal wetland	4 or more types present: points = 3 3 types present: points = 2 2 types present: points = 1 1 type present: points = 0 2 points 2 points	
H 1.3. Richness of plant species 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, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 < 5 species points = 0	1	
H 1.4. Interspersion of habitats 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  	3

Wetland name or number: A

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i> <input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input checked="" type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <input checked="" type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)	2
Total for H 1	9
<p>Rating of Site Potential If score is: 15-18 = H <input checked="" type="checkbox"/> 7-14 = M <input type="checkbox"/> 0-6 = L Record the rating on the first page</p>	
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit). Calculate: % undisturbed habitat $\frac{2}{2} + [(\% \text{ moderate and low intensity land uses})/2]$. $29 = \frac{2}{2} + \frac{31}{2} = 31\%$ If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0	2
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: % undisturbed habitat $\frac{4}{4} + [(\% \text{ moderate and low intensity land uses})/2]$. $42 = \frac{4}{4} + \frac{46}{2} = 46\%$ Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	2
H 2.3. Land use intensity in 1 km Polygon: If > 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	4
<p>Rating of Landscape Potential If score is: <input checked="" type="checkbox"/> 4-6 = H <input type="checkbox"/> 1-3 = M <input type="checkbox"/> < 1 = L Record the rating on the first page</p>	
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? <i>Choose only the highest score that applies to the wetland being rated.</i> Site meets ANY of the following criteria: <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> 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 Site does not meet any of the criteria above If score is: <input type="checkbox"/> 2 = H <input checked="" type="checkbox"/> 1 = M <input type="checkbox"/> 0 = L Record the rating on the first page	1

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 2.1 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/001165/wdfw001165.pdf>
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- 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>
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Wetland name or number: A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<p>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</p> <p>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</p> <p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p> <p>Cat. II <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p>
<p>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 WNHCP 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 WNHCP for resources to help determine the presence of these elements. Yes – Submit data to WA Natural Heritage Program for determination.¹³⁶ No – Go to SC 2.3 No = Not a WHCV SC 2.3. Did WNHCP 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</p> <p>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 = Is 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 = Is a 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 = Is a Category I bog No = Is not a bog</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p>

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

<p>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</p> <p>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 H1.5 in the manual). — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than ¼ ac (4350 ft²) Yes = Category I No = Category II</p> <p>SC 6.0. Intertidal 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 intertidal 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</p> <p>Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. II <input type="checkbox"/></p> <p>Cat. III <input type="checkbox"/></p> <p>Cat. IV <input type="checkbox"/></p>
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Wetland name or number B _____

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B Date of site visit: 12/19/23
 Rated by Collin Van Slyke, Candace Trusty Trained by Ecology? Yes No Date of training: 2021, 2020

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

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

Source of base aerial photo/map San Juan County 2023

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

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 - 27

Category II – Total score = 20 - 22

Category III – Total score = 16 - 19

Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat
Site Potential	HO M O L ⊕	HO M ⊗ LO	HO MO L ⊗
Landscape Potential	HO M ⊗ LO	HO M ⊗ LO	HO M ⊗ LO
Value	H ⊗ MO LO	HO MO LO	HO MO LO
Score Based on Ratings	6	7	5
TOTAL			18

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 III IV
Interdunal	I II III IV
None of the above	<input checked="" type="checkbox"/>

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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	A3
Hydroperiods	D 1.4, H 1.2	B4
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	B4
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	A3
Map of the contributing basin	D 4.3, D 5.3	B4
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	D
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	D

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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

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Wetland name or number B

HGM Classification of Wetlands in Western Washington

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

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

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

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

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

NO - Saltwater Tidal Fringe (Estuarine)

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

YES - Freshwater Tidal Fringe

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

NO - go to 3

YES - The wetland class is Flats
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

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

- The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
- At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO - go to 4

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

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

- The wetland is on a slope (*slope can be very gradual*).
- The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
- The water leaves the wetland **without being impounded**.

NO - go to 5

YES - The wetland class is Slope

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

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

- The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- The overbank flooding occurs at least once every 2 years.

Wetland name or number B

NO - go to 6

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

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

NO - go to 7

YES - The wetland class is Depressional

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

NO - go to 8

YES - The wetland class is Depressional

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

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

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

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

Wetland name or number: B

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). Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. Wetland has an unconfined, or slightly constricted, surface outlet that is permanently flowing	points = 3 points = 3 points = 2 points = 1 points = 1
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use WRCS definitions). Yes = 4. No = 0	0
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 Wetland has persistent, ungrazed, plants > 1/2 of area Wetland has persistent, ungrazed plants > 1/10 of area Wetland has persistent, ungrazed plants < 1/10 of area	points = 5 points = 3 points = 1 points = 0
D 1.4. Characteristics of seasonal ponding or inundation: This is the area that is ponded for at least 2 months. See description in manual. Area seasonally ponded is > 1/2 total area of wetland Area seasonally ponded is > 1/4 total area of wetland Area seasonally ponded is < 1/4 total area of wetland	points = 4 points = 2 points = 0
Total for D 1	2

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

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
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
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
Total for D 3	2

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

Wetland name or number: B

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) Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch Wetland has an unconfined, or slightly constricted, surface outlet that is permanently flowing	points = 4 points = 2 points = 1 points = 0
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 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet The wetland is a "headwater" wetland Wetland is flat but has small depressions on the surface that trap water Marks of ponding less than 0.5 ft (6 in)	points = 7 points = 5 points = 3 points = 3 points = 1 points = 0
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire wetland is in the Flats class	points = 5 points = 3 points = 0 points = 5
Total for D 4	7

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

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 down-gradient 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 down-gradient of unit. • Surface flooding problems are in a sub-basin farther down-gradient. • Flooding from groundwater is an issue in the sub-basin. • The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____ • There are no problems with flooding downstream of the wetland.	points = 2 points = 1 points = 1 points = 0 points = 0
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
Total for D 6	2

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

Wetland name or number: **B**

<p>HABITAT FUNCTIONS - Indicators that site functions to provide important habitat</p>	
<p>H 1.0. Does the site have the potential to provide habitat?</p> <p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class.</i> 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.</p> <p><input checked="" type="checkbox"/> Aquatic bed</p> <p><input checked="" type="checkbox"/> Emergent</p> <p><input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover)</p> <p><input type="checkbox"/> Forested (areas where trees have > 30% cover)</p> <p><i>If the unit has a Forested class, check if:</i></p> <p><input type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon</p>	<p>0</p> <p>4 structures or more: points = 4</p> <p>3 structures: points = 2</p> <p>2 structures: points = 1</p> <p>1 structure: points = 0</p>
<p>H 1.2. Hydroperiods: Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland 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).</p> <p><input checked="" type="checkbox"/> Permanently flooded or inundated</p> <p><input checked="" type="checkbox"/> Seasonally flooded or inundated</p> <p><input type="checkbox"/> Occasionally flooded or inundated</p> <p><input checked="" type="checkbox"/> Saturated only</p> <p><input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland</p> <p><input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland</p> <p><input type="checkbox"/> Lake Fringe wetland</p> <p><input type="checkbox"/> Freshwater tidal wetland</p>	<p>2</p> <p>4 or more types present: points = 3</p> <p>3 types present: points = 2</p> <p>2 types present: points = 1</p> <p>1 type present: points = 0</p> <p>2 points</p> <p>2 points</p>
<p>H 1.3. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft.².</p> <p>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</p> <p>If you counted: > 19 species: points = 2</p> <p>5 - 19 species: points = 1</p> <p>< 5 species: points = 0</p>	<p>1</p>
<p>H 1.4. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high.</p>	<p>None = 0 points</p> <p>Low = 1 point</p> <p>Moderate = 2 points</p> <p>High = 3 points</p>

Wetland name or number: **B**

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input checked="" type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)</p>	<p>2</p>
<p>Total for H 1</p> <p>Add the points in the boxes above</p>	<p>6</p>
<p>Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L <i>Record the rating on the first page</i></p>	
<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>	
<p>H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).</p> <p><i>Calculate:</i> % undisturbed habitat $\frac{7}{2} + [(\% \text{ moderate and low intensity land uses})/2]$. $35 = \frac{7}{2} + 42 = \frac{89}{2} = 44.5\%$</p> <p>If total accessible habitat is:</p> <p>> ⅓ (33.3%) of 1 km Polygon: points = 3</p> <p>20-33% of 1 km Polygon: points = 2</p> <p>10-19% of 1 km Polygon: points = 1</p> <p>< 10% of 1 km Polygon: points = 0</p>	<p>2</p>
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat $\frac{7}{2} + [(\% \text{ moderate and low intensity land uses})/2]$. $42 = \frac{7}{2} + 49 = \frac{97}{2} = 48.5\%$</p> <p>Undisturbed habitat > 50% of Polygon: points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches: points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches: points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon: points = 0</p>	<p>1</p>
<p>H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use: points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity: points = 0</p>	<p>0</p>
<p>Total for H 2</p> <p>Add the points in the boxes above</p>	<p>3</p>
<p>Rating of Landscape Potential If score is: 4-6 = H X 1-3 = M 0-1 = L <i>Record the rating on the first page</i></p>	
<p>H 3.0. Is the habitat provided by the site valuable to society?</p>	
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria:</p> <p><input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</p> <p><input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><input type="checkbox"/> 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</p> <p>Site has 1 or 2 priority habitats (listed on next page) within 100 m</p>	<p>1</p>
<p>Site does not meet any of the criteria above</p>	<p>points = 0</p>
<p>Rating of Value If score is: 2 = H X 1 = M 0 = L <i>Record the rating on the first page</i></p>	

Wetland name or number: B

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 2.1 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/001165/wdfw001165.pdf>
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- 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>
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CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<p>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</p> <p>Yes – Go to SC 1.1 No – Not an estuarine wetland</p> <p>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</p>	<p>Cat. I <input type="checkbox"/></p>
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p> <p>Yes = Category I No = Category II</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. II <input type="checkbox"/></p>
<p>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 WNHCP 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 WNHCP 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 WNHCP 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</p>	<p>Cat. I <input type="checkbox"/></p>
<p>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 = Is 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 = Is a 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 = Is a Category I bog No = Is not a bog</p>	<p>Cat. I <input type="checkbox"/></p>

¹³⁵ <https://www.dnr.wa.gov/NHPdata>

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

Wetland name or number: B _____

SC 4.0. Forested Wetlands

<p>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).</p> <p>Yes = Category I No = Not a forested wetland for this section</p>	<p>Cat. I <input type="checkbox"/></p>
<p>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 H1.5 in the manual). — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than ¼ ac (4350 ft²) Yes = Category I No = Category II</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. II <input type="checkbox"/></p>
<p>SC 6.0. Intertidal 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 intertidal 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</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. II <input type="checkbox"/></p> <p>Cat. III <input type="checkbox"/></p> <p>Cat. IV <input type="checkbox"/></p>
<p>Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>-</p>

Wetland name or number C _____

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland C Date of site visit: 12/19/23
 Rated by Collin Van Slyke, Candace Trusty Trained by Ecology? Yes No Date of training: 2021, 2020

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

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

Source of base aerial photo/map San Juan County 2023

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

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 - 27

Category II – Total score = 20 - 22

Category III – Total score = 16 - 19

Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat
Site Potential	HO M ⊗ LO	HO MO L ⊗ HO MO L ⊗	Circle the appropriate ratings
Landscape Potential	H ⊗ MO LO	HO M ⊗ LO HO M ⊗ LO	
Value	H ⊗ MO LO	H ⊗ MO LO HO MO L ⊗	
Score Based on Ratings	8	6	4
TOTAL			18

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

- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 6 = H,M,M
- 5 = H,M,L
- 4 = M,M,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 III IV
Interdunal	I II III IV
None of the above	<input checked="" type="checkbox"/>

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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	A4
Hydroperiods	D 1.4, H 1.2	B6
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	B5
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	A4
Map of the contributing basin	D 4.3, D 5.3	B5
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C3
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	D
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	D

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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

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Wetland name or number C

HGM Classification of Wetlands in Western Washington

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

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

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

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

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

NO - Saltwater Tidal Fringe (Estuarine)

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

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

NO - go to 3

YES - The wetland class is Flats
If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.

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

- ___ The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
- ___ At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO - go to 4

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

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

- ___ The wetland is on a slope (slope can be very gradual).
- ___ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
- ___ The water leaves the wetland **without being impounded**.

NO - go to 5

YES - The wetland class is Slope

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

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

- ___ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ___ The overbank flooding occurs at least once every 2 years.

Wetland name or number C

NO - go to 6

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

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

NO - go to 7

✗ **YES - The wetland class is Depressional**

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

NO - go to 8

YES - The wetland class is Depressional

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

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

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

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

Wetland name or number: C

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). Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	points = 3 points = 2 2
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use WRCS definitions). Yes = 4. No = 0	points = 1 points = 1 0
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 Wetland has persistent, ungrazed, plants > 1/2 of area Wetland has persistent, ungrazed plants > 1/10 of area Wetland has persistent, ungrazed plants < 1/10 of area	points = 5 points = 3 points = 1 points = 1 points = 0 5
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 > 1/2 total area of wetland Area seasonally ponded is > 1/4 total area of wetland Area seasonally ponded is < 1/4 total area of wetland	points = 4 points = 2 points = 0 4
Total for D 1	11

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 1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0 1
D 2.3. Are there 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?	Yes = 1 No = 0 0
Total for D 2	3

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

D 3.0. Is the water quality improvement provided by the site valuable to society?	
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0 1
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	Yes = 1 No = 0 1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (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	2

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

Wetland name or number: C

DEPRESSIONAL AND FLATS WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation	
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression with no surface water leaving it (no outlet) Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch Wetland has an unconfstricted, or slightly constricted, surface outlet that is permanently flowing	points = 4 points = 2 points = 1 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 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet The wetland is a "headwater" wetland Wetland is flat but has small depressions on the surface that trap water Marks of ponding less than 0.5 ft (6 in)	points = 7 points = 5 points = 3 points = 3 points = 1 points = 0 0
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire wetland is in the Flats class	points = 5 points = 3 points = 0 points = 5 0
Total for D 4	2

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 1
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	2

Rating of Landscape Potential If score is: $3 = H$ $1 \text{ or } 2 = M$ $0 = L$ 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 down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):	
<ul style="list-style-type: none"> Flooding occurs in a sub-basin that is immediately down-gradient of unit. Surface flooding problems are in a sub-basin farther down-gradient. Flooding from groundwater is an issue in the sub-basin. The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____ There are no problems with flooding downstream of the wetland. 	points = 2 points = 1 points = 1 points = 0 points = 0 2
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	2

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

Wetland name or number: C

<p>HABITAT FUNCTIONS - Indicators that site functions to provide important habitat</p>	
<p>H 1.0. Does the site have the potential to provide habitat?</p> <p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class.</i> 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.</p> <p> <input checked="" type="checkbox"/> Aquatic bed <input checked="" type="checkbox"/> Emergent <input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) <input checked="" type="checkbox"/> Forested (areas where trees have > 30% cover) If the unit has a Forested class, check if: <input type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon <input type="checkbox"/> Hydroperiods: 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). <input type="checkbox"/> Permanently flooded or inundated <input checked="" type="checkbox"/> Seasonally flooded or inundated <input type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Saturated only <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake Fringe wetland <input type="checkbox"/> Freshwater tidal wetland </p>	<p>1</p> <p>4 structures or more: points = 4 3 structures: points = 2 2 structures: points = 1 1 structure: points = 0</p> <p>4 or more types present: points = 3 3 types present: points = 2 2 types present: points = 1 1 type present: points = 0</p> <p>2 points 2 points</p>
<p>H 1.3. Richness of plant species 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, Canadian thistle If you counted: > 19 species 5 - 19 species < 5 species</p>	<p>1</p> <p>points = 2 points = 1 points = 0</p>
<p>H 1.4. Interspersion of habitats 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.</p>	<p>2</p> <p>None = 0 points Low = 1 point Moderate = 2 points High = 3 points</p>

Wetland name or number: C

<p>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.</p> <p> <input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <input type="checkbox"/> 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) <input type="checkbox"/> 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) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata) </p>	<p>0</p>
<p>Total for H 1</p>	<p>5</p>
<p>Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L Record the rating on the first page</p>	
<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p> <p>H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit). Calculate: % undisturbed habitat₀ + [(% moderate and low intensity land uses)/2]. 18 = ____ 18 ____ % If total accessible habitat is: > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon points = 1 < 10% of 1 km Polygon points = 0</p> <p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: % undisturbed habitat₇ + [(% moderate and low intensity land uses)/2]. 42 = ____ 49 ____ % Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0</p> <p>H 2.3. Land use intensity in 1 km Polygon; if > 50% of 1 km Polygon is high intensity land use points = (- 2) ≤ 50% of 1 km Polygon is high intensity points = 0</p>	<p>1</p> <p>0</p> <p>2</p>
<p>Total for H 2</p>	<p>2</p>
<p>Rating of Landscape Potential If score is: 4-6 = H X 1-3 = M < 1 = L Record the rating on the first page</p>	
<p>H 3.0. Is the habitat provided by the site valuable to society?</p> <p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated. Site meets ANY of the following criteria: <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> 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 </p>	<p>0</p> <p>points = 1 points = 0</p>
<p>Total for H 3</p>	<p>0</p>
<p>Rating of Value If score is: 2 = H 1 = M X 0 = L Record the rating on the first page</p>	

Wetland name or number C

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 2.1 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/001165/wdfw001165.pdf>
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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>
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Wetland name or number: C

Wetland Type	CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS	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 <input type="checkbox"/>
SC 1.2.	Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i> , see page 25) — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II	Cat. I <input type="checkbox"/> Cat. II <input type="checkbox"/>
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 WNHCP 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 WNHCP 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 WNHCP 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 <input type="checkbox"/>
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 = Is 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 = Is a 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 = Is a Category I bog No = Is not a bog	Cat. I <input type="checkbox"/>

¹³⁵ <https://www.dnr.wa.gov/NHPdata>

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

Wetland name or number: C

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 <input type="checkbox"/>
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 H1.5 in the manual). — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than ¼ ac (4350 ft ²) Yes = Category I No = Category II	Cat. I <input type="checkbox"/> Cat. II <input type="checkbox"/>
SC 6.0. Intertidal 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 intertidal 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 <input type="checkbox"/> Cat. II <input type="checkbox"/> Cat. III <input type="checkbox"/> Cat. IV <input type="checkbox"/>
Category of wetland based on Special Characteristics	If you answered No for all types, enter "Not Applicable" on Summary Form	-

Wetland name or number D _____

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland D _____ Date of site visit: 12/19/23
 Rated by Collin Van Slyke, Candace Trusty _____ Trained by Ecology? Yes No Date of training: 2021, 2020

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

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

Source of base aerial photo/map San Juan County 2023

OVERALL WETLAND CATEGORY IV _____ (based on functions or special characteristics _____)

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 - 27

Category II – Total score = 20 - 22

Category III – Total score = 16 - 19

Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat
Site Potential	HO M O L ⊕	HO MO L ⊕	HO MO L ⊕
Landscape Potential	HO M ⊕ LO	HO M ⊕ LO	HO M ⊕ LO
Value	H ⊕ MO LO	HO MO L ⊕	HO MO L ⊕
Score Based on Ratings	6	4	4
TOTAL			14

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

- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 6 = H,M,M
- 5 = H,L,L
- 4 = M,M,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 III IV
Interdunal	I II III IV
None of the above	<input checked="" type="checkbox"/>

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Wetland name or number D _____

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	A2
Hydroperiods	D 1.4, H 1.2	B3
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	B3
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	A2
Map of the contributing basin	D 4.3, D 5.3	B3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	D
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	D

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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	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 Rating System for Western WA: 2014 Update
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Wetland name or number D

HGM Classification of Wetlands in Western Washington

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

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

- 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.*
- 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.*
- 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)
- Does the entire wetland unit **meet all** of the following criteria?
 The wetland is on a slope (*slope can be very gradual*).
 The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
 The water leaves the wetland **without being impounded**.
NO - go to 5
 YES - The wetland class is **Slope**
NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).
- Does the entire wetland unit **meet all** of the following criteria?
 The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
 The overbank flooding occurs at least once every 2 years.

Wetland name or number D

NO - go to 6

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

YES - The wetland class is **Riverine**

- 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**

- 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**

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

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

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

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

Wetland name or number: D

SLOPE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
S 1.0. Does the site have the potential to improve water quality?	2
S 1.1. Characteristics of the average slope of the wetland: (A 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance) Slope is 1% or less Slope is > 1%-2% Slope is > 2%-5% Slope is greater than 5%	
S 1.2. The soil 2 in. below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in. Dense, uncut, herbaceous plants > 90% of the wetland area Dense, uncut, herbaceous plants > 1/2 of area Dense, woody, plants > 1/2 of area Dense, uncut, herbaceous plants > 1/4 of area Does not meet any of the criteria above for plants	0
Total for S 1	2

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

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

Rating of Landscape Potential If score is: **1-2 = M** **0 = L** Record the rating on the first page

S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	1
Yes = 1 No = 0	
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? At least one aquatic resource in the basin is on the 303(d) list.	1
Yes = 1 No = 0	
S 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 unit is found.	0
Yes = 2 No = 0	
Total for S 3	2

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

Wetland name or number: D

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	0
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows. Dense, uncut, rigid plants cover > 90% of the area of the wetland All other conditions	
points = 1 points = 0	

Rating of Site Potential If score is: **1 = M** **0 = L** Record the rating on the first page

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

Rating of Landscape Potential If score is: **1 = M** **0 = L** Record the rating on the first page

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

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

NOTES and FIELD OBSERVATIONS:

Wetland name or number: D

<p style="text-align: center;">These questions apply to wetlands of all HGM classes.</p> <p>HABITAT FUNCTIONS - Indicators that site functions to provide important habitat</p>	
H 1.0. Does the site have the potential to provide habitat?	0
H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class.</i> 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. <input checked="" type="checkbox"/> Aquatic bed <input checked="" type="checkbox"/> Emergent <input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) <input type="checkbox"/> Forested (areas where trees have > 30% cover) <i>If the unit has a Forested class, check if:</i> <input type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	0
H 1.2. Hydroperiods: Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland 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). <input type="checkbox"/> Permanently flooded or inundated <input checked="" type="checkbox"/> Seasonally flooded or inundated <input type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Saturated only <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake Fringe wetland <input type="checkbox"/> Freshwater tidal wetland	1
H 1.3. Richness of plant species 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, Canadian thistle If you counted: > 19 species points = 2 5 - 19 species points = 1 < 5 species points = 0	1
H 1.4. Interspersion of habitats 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.	0

Wetland name or number: D

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i> <input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)	0
Total for H 1	2
<p>Rating of Site Potential If score is: 15-18 = H 7-14 = M X-0 = L <i>Record the rating on the first page</i></p>	
H 2.0. Does the landscape have the potential to support the habitat functions of the site?	1
H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit). Calculate: % undisturbed habitat $\frac{1}{2} + [(\% \text{ moderate and low intensity land uses})/2]$. $\frac{15}{2} = 7.5 + 16 = 23.5\%$ If total accessible habitat is: > 7/10 (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	1
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: % undisturbed habitat $\frac{2}{2} + [(\% \text{ moderate and low intensity land uses})/2]$. $\frac{46}{2} = 23 + 48 = 71\%$ Undisturbed habitat > 50% of Polygon points = 3 Undisturbed habitat 10-50% and in 1-3 patches points = 2 Undisturbed habitat 10-50% and > 3 patches points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0	2
H 2.3. Land use intensity in 1 km Polygon: If > 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	3
<p>Rating of Landscape Potential If score is: 4-6 = H X-1-3 = M 0-1 = L <i>Record the rating on the first page</i></p>	
H 3.0. Is the habitat provided by the site valuable to society?	0
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i> Site meets ANY of the following criteria: <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> 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 Site does not meet any of the criteria above If score is: 2 = H 1 = M X-0 = L <i>Record the rating on the first page</i>	0

Wetland name or number: D

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 2.1 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/001165/wdfw001165.pdf>
Wetland Rating System for Western WA: 2014 Update
Rating Form – Version 2, July 2023

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 Rating System for Western WA: 2014 Update
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Wetland name or number: D

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<p>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</p> <p>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</p> <p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p> <p>Cat. II <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p>
<p>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 WNHCP 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 WNHCP 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 WNHCP 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</p> <p>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 = Is 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 = Is a 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 = Is a Category I bog No = Is not a bog</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p>

¹³⁵ <https://www.dnr.wa.gov/NHPdata>

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

Wetland name or number: D

SC 4.0. Forested Wetlands

<p>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</p> <p>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 H1.5 in the manual). — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than ¼ ac (4350 ft²) Yes = Category I No = Category II</p> <p>SC 6.0. Intertidal 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 intertidal 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</p> <p>Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. II <input type="checkbox"/></p> <p>Cat. III <input type="checkbox"/></p> <p>Cat. IV <input type="checkbox"/></p>
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Wetland name or number E _____

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland E Date of site visit: 12/19/23
 Rated by Collin Van Slyke, Candace Trusty Trained by Ecology? Yes No Date of training: 2021, 2020

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

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

Source of base aerial photo/map San Juan County 2023

OVERALL WETLAND CATEGORY IV (based on functions or special characteristics)

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 - 27

Category II – Total score = 20 - 22

Category III – Total score = 16 - 19

Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat
Site Potential	HO M O L ⊕	HO MO L ⊕	HO MO L ⊕
Landscape Potential	HO M ⊕ LO	HO M ⊕ LO	HO M ⊕ LO
Value	H ⊕ MO LO	HO MO L ⊕	HO MO L ⊕
Score Based on Ratings	6	4	4
TOTAL			14

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

- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 6 = H,M,M
- 5 = H,L,L
- 4 = M,M,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 III IV
Interdunal	I II III IV
None of the above	<input checked="" type="checkbox"/>

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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	A2
Hydroperiods	D 1.4, H 1.2	B3
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	B3
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	A2
Map of the contributing basin	D 4.3, D 5.3	B3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	D
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	D

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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

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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.

- 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.*
- 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.*
- 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)

- Does the entire wetland unit **meet all** of the following criteria?
 The wetland is on a slope (*slope can be very gradual*).
 The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
 The water leaves the wetland **without being impounded**.
NO - go to 5
YES - The wetland class is **Slope**

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

- Does the entire wetland unit **meet all** of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
The overbank flooding occurs at least once every 2 years.

Wetland name or number: E _____

NO - go to 6

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

- 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**
- 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**
- 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: E _____

SLOPE WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
S 1.0. Does the site have the potential to improve water quality?	1
S 1.1. Characteristics of the average slope of the wetland: (A 1% slope has a 1 ft vertical drop in elevation for every 100 ft of horizontal distance) Slope is 1% or less Slope is > 1%-2% Slope is > 2%-5% Slope is greater than 5%	
points = 3 points = 2 points = 1 points = 0	
S 1.2. The soil 2 in. below the surface (or duff layer) is true clay or true organic (use NRCS definitions): Yes = 3 No = 0	0
S 1.3. Characteristics of the plants in the wetland that trap sediments and pollutants: Choose the points appropriate for the description that best fits the plants in the wetland. Dense means you have trouble seeing the soil surface (>75% cover), and uncut means not grazed or mowed and plants are higher than 6 in. Dense, uncut, herbaceous plants > 90% of the wetland area Dense, uncut, herbaceous plants > 1/2 of area Dense, woody, plants > 1/2 of area Dense, uncut, herbaceous plants > 1/4 of area Does not meet any of the criteria above for plants	
points = 6 points = 3 points = 2 points = 1 points = 0	
Total for S 1	1
Rating of Site Potential If score is: <u>12</u> = H <u>6-11</u> = M <u>0-5</u> = L	

<i>Record the rating on the first page</i>	
S 2.0. Does the landscape have the potential to support the water quality function of the site?	
S 2.1. Is > 10% of the area within 150 ft on the uphill side of the wetland in land uses that generate pollutants?	1
Yes = 1 No = 0	
S 2.2. Are there other sources of pollutants coming into the wetland that are not listed in question S 2.1?	0
Yes = 1 No = 0	
Total for S 2	1
Rating of Landscape Potential If score is: <u>1-2</u> = M <u>0</u> = L	

<i>Record the rating on the first page</i>	
S 3.0. Is the water quality improvement provided by the site valuable to society?	
S 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	1
Yes = 1 No = 0	
S 3.2. Is the wetland in a basin or sub-basin where water quality is an issue? At least one aquatic resource in the basin is on the 303(d) list.	1
Yes = 1 No = 0	
S 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 unit is found.	0
Yes = 2 No = 0	
Total for S 3	2
Rating of Value If score is: <u>2-4</u> = H <u>1</u> = M <u>0</u> = L	
<i>Record the rating on the first page</i>	

Wetland name or number: E _____

SLOPE WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream erosion	
S 4.0. Does the site have the potential to reduce flooding and stream erosion?	0
S 4.1. Characteristics of plants that reduce the velocity of surface flows during storms: Choose the points appropriate for the description that best fits conditions in the wetland. Stems of plants should be thick enough (usually > 1/8 in), or dense enough, to remain erect during surface flows. Dense, uncut, rigid plants cover > 90% of the area of the wetland All other conditions	
points = 1 points = 0	
Rating of Site Potential If score is: <u>1</u> = M <u>0</u> = L	
<i>Record the rating on the first page</i>	
S 5.0. Does the landscape have the potential to support the hydrologic functions of the site?	
S 5.1. Is more than 25% of the area within 150 ft upslope of wetland in land uses or cover that generate excess surface runoff?	1
Yes = 1 No = 0	
Rating of Landscape Potential If score is: <u>1</u> = M <u>0</u> = L	
<i>Record the rating on the first page</i>	
S 6.0. Are the hydrologic functions provided by the site valuable to society?	
S 6.1. Distance to the nearest areas downstream that have flooding problems: The sub-basin immediately down-gradient of site has flooding problems that result in damage to human or natural resources (e.g., houses or salmon redds) Surface flooding problems are in a sub-basin farther down-gradient No flooding problems anywhere downstream	0
points = 2 points = 1 points = 0	
S 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	0
Yes = 2 No = 0	
Total for S 6	0
Rating of Value If score is: <u>2-4</u> = H <u>1</u> = M <u>0</u> = L	
<i>Record the rating on the first page</i>	

NOTES and FIELD OBSERVATIONS:

Wetland name or number: E

<p>These questions apply to wetlands of all HGM classes.</p> <p>HABITAT FUNCTIONS - Indicators that site functions to provide important habitat</p>	
<p>H 1.0. Does the site have the potential to provide habitat?</p> <p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class.</i> 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.</p> <p><input checked="" type="checkbox"/> Aquatic bed</p> <p><input type="checkbox"/> Emergent</p> <p><input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover)</p> <p><input type="checkbox"/> Forested (areas where trees have > 30% cover)</p> <p><i>If the unit has a Forested class, check if:</i></p> <p><input type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon</p> <p>H 1.2. Hydroperiods: Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland 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).</p> <p><input type="checkbox"/> Permanently flooded or inundated</p> <p><input type="checkbox"/> Seasonally flooded or inundated</p> <p><input type="checkbox"/> Occasionally flooded or inundated</p> <p><input checked="" type="checkbox"/> Saturated only</p> <p><input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland</p> <p><input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland</p> <p><input type="checkbox"/> Lake Fringe wetland</p> <p><input type="checkbox"/> Freshwater tidal wetland</p>	<p>0</p> <p>3 structures: points = 4 2 structures: points = 2 1 structure: points = 0</p> <p>4 structures or more: points = 4</p> <p>4 or more types present: points = 3 3 types present: points = 2 2 types present: points = 1 1 type present: points = 0</p> <p>2 points 2 points</p>
<p>H 1.3. Richness of plant species</p> <p>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, Canadian thistle</p> <p>If you counted: > 19 species: points = 2 5 - 19 species: points = 1 < 5 species: points = 0</p> <p>H 1.4. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high.</p>	<p>1</p> <p>points = 2 points = 1 points = 0</p> <p>None = 0 points</p> <p>Low = 1 point</p> <p>Moderate = 2 points</p> <p>High = 3 points</p>

Wetland name or number: E

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)</p> <p>Total for H 1: Add the points in the boxes above</p>	<p>0</p> <p>1</p>
<p>Rating of Site Potential If score is: 15-18 = H 7-14 = M X 0-6 = L Record the rating on the first page</p>	
<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p> <p>H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).</p> <p><i>Calculate:</i> % undisturbed habitat: $1 + [(\% \text{ moderate and low intensity land uses})/2]$. $15 = \frac{16}{2} = 16$ %</p> <p>If total accessible habitat is:</p> <p>> ⅓ (33.3%) of 1 km Polygon: points = 3</p> <p>20-33% of 1 km Polygon: points = 2</p> <p>10-19% of 1 km Polygon: points = 1</p> <p>< 10% of 1 km Polygon: points = 0</p> <p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p><i>Calculate:</i> % undisturbed habitat: $2 + [(\% \text{ moderate and low intensity land uses})/2]$. $46 = \frac{48}{2} = 48$ %</p> <p>Undisturbed habitat > 50% of Polygon: points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches: points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches: points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon: points = 0</p> <p>H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use: points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity: points = 0</p> <p>Total for H 2: Add the points in the boxes above</p>	<p>1</p> <p>2</p> <p>0</p> <p>3</p>
<p>Rating of Landscape Potential If score is: 4-6 = H X 1-3 = M < 1 = L Record the rating on the first page</p>	
<p>H 3.0. Is the habitat provided by the site valuable to society?</p> <p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria:</p> <p><input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</p> <p><input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><input type="checkbox"/> 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</p> <p>Site has 1 or 2 priority habitats (listed on next page) within 100 m</p> <p>Site does not meet any of the criteria above</p> <p>Rating of Value If score is: 2 = H 1 = M X 0 = L Record the rating on the first page</p>	<p>0</p> <p>points = 1 points = 0</p>

Wetland name or number: E

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 2.1 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/001165/wdfw001165.pdf>
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- 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>
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CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<p>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</p> <p>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</p> <p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p> <p>Cat. II <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p>
<p>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 WNHCP 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 WNHCP 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 WNHCP 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</p> <p>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 = Is 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 = Is a 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 = Is a Category I bog No = Is not a bog</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p>

¹³⁵ <https://www.dnr.wa.gov/NHPdata>

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

Wetland name or number: E

SC 4.0. Forested Wetlands

<p>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</p> <p>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 H1.5 in the manual). — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than ¼ ac (4350 ft²) Yes = Category I No = Category II</p> <p>SC 6.0. Intertidal 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 intertidal 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</p> <p>Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. II <input type="checkbox"/></p> <p>Cat. III <input type="checkbox"/></p> <p>Cat. IV <input type="checkbox"/></p>
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Wetland name or number OS-1 _____

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland OS-1 _____ Date of site visit: 12/19/23
 Rated by Collin Van Slyke, Candace Trusty _____ Trained by Ecology? Yes No Date of training: 2021, 2020

HGM Class used for rating Depressional _____ Wetland has multiple HGM classes? Y N

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

Source of base aerial photo/map San Juan County 2023 _____

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

1. Category of wetland based on FUNCTIONS

Category I – Total score = 23 - 27

Category II – Total score = 20 - 22

Category III – Total score = 16 - 19

Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat
Site Potential	H⊙ M⊙ L⊙	H⊙ M⊙ L⊙	H⊙ M⊙ L⊙
Landscape Potential	H⊙ M⊙ L⊙	H⊙ M⊙ L⊙	H⊙ M⊙ L⊙
Value	H⊙ M⊙ L⊙	H⊙ M⊙ L⊙	H⊙ M⊙ L⊙
Score Based on Ratings	8	6	4
TOTAL			18

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

- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 6 = H,M,M
- 5 = H,L,L
- 4 = M,M,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 III IV
Interdunal	I II III IV
None of the above	<input checked="" type="checkbox"/>

Wetland Rating System for Western WA: 2014 Update
 Rating Form – Version 2, July 2023

Wetland name or number OS-1 _____

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	A2
Hydroperiods	D 1.4, H 1.2	B3
Location of outlet (can be added to map of hydroperiods)	D 1.1, D 4.1	B3
Boundary of area within 150 ft of the wetland (can be added to another figure)	D 2.2, D 5.2	A2
Map of the contributing basin	D 4.3, D 5.3	B3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	C2
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	D
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	D

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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (can be added to another figure)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 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 undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	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 Rating System for Western WA: 2014 Update
 Rating Form – Version 2, July 2023

Wetland name or number OS-1

HGM Classification of Wetlands in Western Washington

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

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

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

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

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

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

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

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

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

- ___ The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
- ___ At least 30% of the open water area is deeper than 6.6 ft (2 m).

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

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

- ___ The wetland is on a slope (slope can be very gradual).
- ___ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks,
- ___ The water leaves the wetland **without being impounded**.

NO - go to 5 YES - The wetland class is **Slope**

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

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

- ___ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,
- ___ The overbank flooding occurs at least once every 2 years.

Wetland name or number OS-1

NO - go to 6

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

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

NO - go to 7

× YES - The wetland class is **Depressional**

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

NO - go to 8

YES - The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC 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 OS-1

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). Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	3 points = 3 points = 2
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (use WPCS definitions). Yes = 4. No = 0	0 points = 1 points = 1
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 Wetland has persistent, ungrazed, plants > 1/2 of area Wetland has persistent, ungrazed plants > 1/10 of area Wetland has persistent, ungrazed plants < 1/10 of area	5 points = 5 points = 3 points = 1 points = 0
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 > 1/2 total area of wetland Area seasonally ponded is > 1/4 total area of wetland Area seasonally ponded is < 1/4 total area of wetland	4 points = 4 points = 2 points = 0
Total for D 1	12 Add the points in the boxes above

Rating of Site Potential If score is: $\times 12-16 = H$ $\times 6-11 = M$ $\times 0-5 = L$ 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?	1 Yes = 1 No = 0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	1 Yes = 1 No = 0
D 2.3. Are there septic systems within 250 ft of the wetland?	1 Yes = 1 No = 0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?	1 Yes = 1 No = 0
Source _____ Horse barn up gradient.	
Total for D 2	4 Add the points in the boxes above

Rating of Landscape Potential If score is: $\times 3$ or $4 = H$ $\times 1$ or $2 = M$ $\times 0 = L$ 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?	0 Yes = 1 No = 0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?	1 Yes = 1 No = 0
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.)	0 Yes = 2 No = 0
Total for D 3	1 Add the points in the boxes above

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

Wetland name or number OS-1

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) Wetland has an intermittently flowing stream/ditch, OR highly constricted permanently flowing outlet Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch Wetland has an unconfined, or slightly constricted, surface outlet that is permanently flowing	4 points = 4 points = 2 points = 1 points = 0
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 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet The wetland is a "headwater" wetland Wetland is flat but has small depressions on the surface that trap water Marks of ponding less than 0.5 ft (6 in)	5 points = 7 points = 5 points = 3 points = 3 points = 1 points = 0
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself. The area of the basin is less than 10 times the area of the wetland unit The area of the basin is 10 to 100 times the area of the unit The area of the basin is more than 100 times the area of the unit Entire wetland is in the Flats class	3 points = 5 points = 3 points = 0 points = 5
Total for D 4	12 Add the points in the boxes above

Rating of Site Potential If score is: $\times 12-16 = H$ $\times 6-11 = M$ $\times 0-5 = L$ 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?	1 Yes = 1 No = 0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	1 Yes = 1 No = 0
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.)?	0 Yes = 1 No = 0
Total for D 5	2 Add the points in the boxes above

Rating of Landscape Potential If score is: $\times 3 = H$ $\times 1$ or $2 = M$ $\times 0 = L$ 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 down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):	
<ul style="list-style-type: none"> Flooding occurs in a sub-basin that is immediately down-gradient of unit. Surface flooding problems are in a sub-basin farther down-gradient. Flooding from groundwater is an issue in the sub-basin. The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why _____ There are no problems with flooding downstream of the wetland. 	0 points = 2 points = 1 points = 1 points = 0 points = 0
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	0 Yes = 2 No = 0
Total for D 6	0 Add the points in the boxes above

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

<p>These questions apply to wetlands of all HGM classes.</p> <p>HABITAT FUNCTIONS - Indicators that site functions to provide important habitat</p>	
<p>H 1.0. Does the site have the potential to provide habitat?</p> <p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class.</i> 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.</p> <p><input checked="" type="checkbox"/> Aquatic bed</p> <p><input type="checkbox"/> Emergent</p> <p><input type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover)</p> <p><input type="checkbox"/> Forested (areas where trees have > 30% cover)</p> <p><i>If the unit has a Forested class, check if:</i></p> <p><input type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon</p> <p>H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland 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).</p> <p><input type="checkbox"/> Permanently flooded or inundated</p> <p><input checked="" type="checkbox"/> Seasonally flooded or inundated</p> <p><input type="checkbox"/> Occasionally flooded or inundated</p> <p><input type="checkbox"/> Saturated only</p> <p><input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland</p> <p><input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland</p> <p><input type="checkbox"/> Lake Fringe wetland</p> <p><input type="checkbox"/> Freshwater tidal wetland</p>	<p>0</p> <p>3 structures: points = 4 2 structures: points = 1 1 structure: points = 0</p> <p>4 structures or more: points = 4 3 structures: points = 2 2 structures: points = 1 1 structure: points = 0</p> <p>4 or more types present: points = 3 3 types present: points = 2 2 types present: points = 1 1 type present: points = 0</p> <p>2 points 2 points</p>
<p>H 1.3. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft.²</p> <p>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</p> <p>If you counted: > 19 species points = 2 5 - 19 species points = 1 < 5 species points = 0</p> <p>H 1.4. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. If you have four or more plant classes or three classes and open water, the rating is always high.</p>	<p>1</p> <p>points = 2 points = 1 points = 0</p> <p>None = 0 points</p> <p>Low = 1 point</p> <p>Moderate = 2 points</p> <p>High = 3 points</p>

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata)</p> <p>Total for H 1.5 Add the points in the boxes above</p>	<p>0</p> <p>1</p>
<p>Rating of Site Potential If score is: 15-18 = H 7-14 = M X-0 = L Record the rating on the first page</p>	
<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p> <p>H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit).</p> <p>Calculate: % undisturbed habitat $\frac{1}{2} + [(\% \text{ moderate and low intensity land uses})/2]$.45 = .16 %</p> <p>If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p> <p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat $\frac{2}{3} + [(\% \text{ moderate and low intensity land uses})/2]$.46 = .48 %</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches points = 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p> <p>H 2.3. Land use intensity in 1 km Polygon; if</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p> <p>Total for H 2. Add the points in the boxes above</p>	
<p>Rating of Landscape Potential If score is: 4-6 = H X-1-3 = M < 1 = L Record the rating on the first page</p>	
<p>H 3.0. Is the habitat provided by the site valuable to society?</p> <p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria:</p> <p><input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page)</p> <p><input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><input type="checkbox"/> 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</p> <p>Site has 1 or 2 priority habitats (listed on next page) within 100 m</p> <p>Site does not meet any of the criteria above</p> <p>Rating of Value If score is: 2 = H 1 = M X-0 = L Record the rating on the first page</p>	

Wetland name or number OS-1

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 2.1 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/001165/wdfw001165.pdf>
Wetland Rating System for Western WA: 2014 Update
Rating Form – Version 2, July 2023

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 Rating System for Western WA: 2014 Update
Rating Form – Version 2, July 2023

Wetland name or number: OS-1

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<p>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</p> <p>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</p> <p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. Yes = Category I No = Category II</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p> <p>Cat. II <input type="checkbox"/></p> <p>Cat. I <input type="checkbox"/></p>
<p>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 WNHCP 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 WNHCP 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 WNHCP 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</p> <p>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 = Is 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 = Is a 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 = Is a Category I bog No = Is not a bog</p>	<p>Cat. I <input type="checkbox"/></p>

¹³⁵ <https://www.dnr.wa.gov/NHPdata>

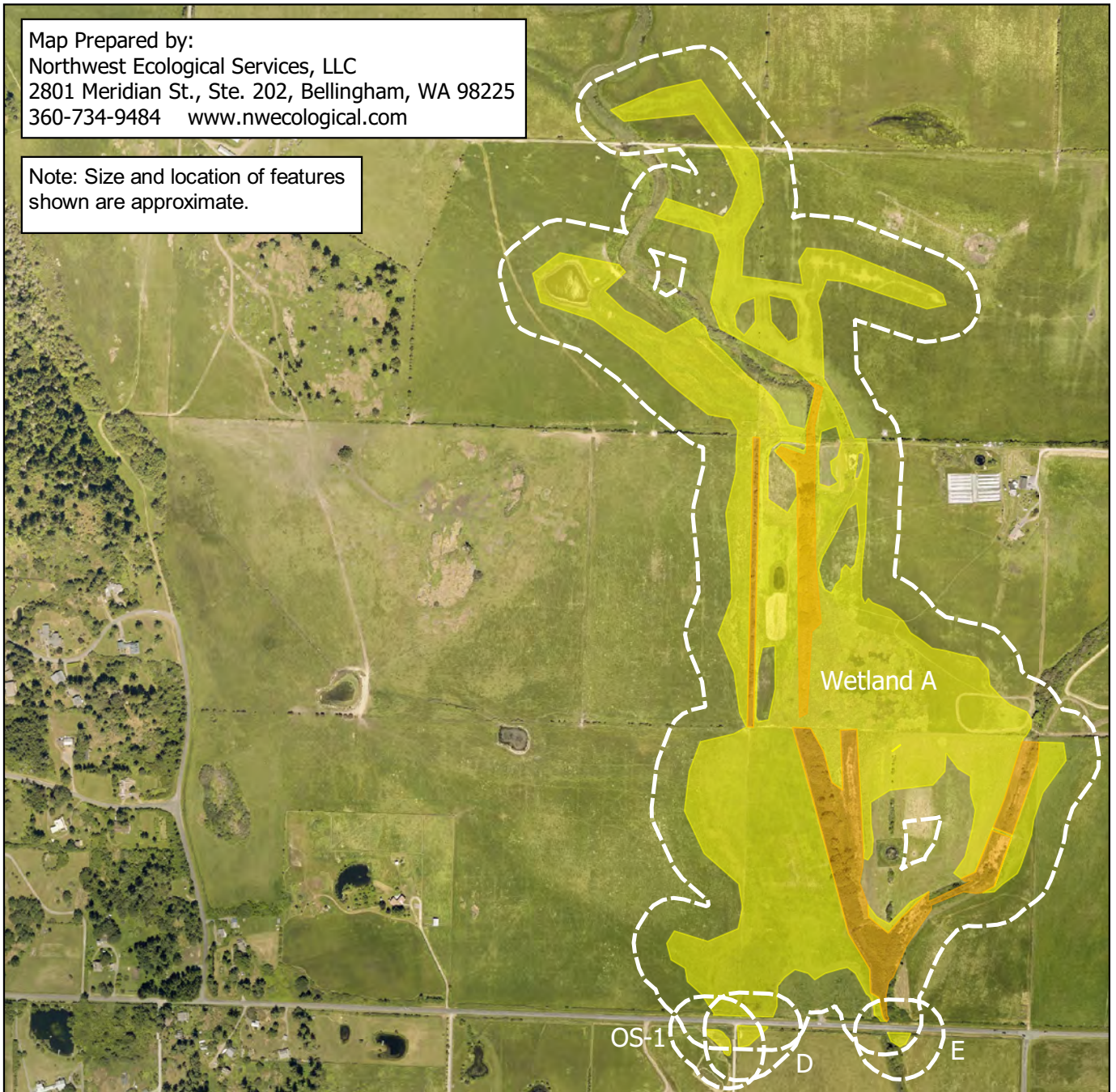
¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf




Wetland name or number: OS-1

<p>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</p> <p>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 H1.5 in the manual). — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than ¼ ac (4350 ft²) Yes = Category I No = Category II</p> <p>SC 6.0. Intertidal 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 intertidal 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</p> <p>Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>Cat. I <input type="checkbox"/></p> <p>Cat. II <input type="checkbox"/></p> <p>Cat. III <input type="checkbox"/></p> <p>Cat. IV <input type="checkbox"/></p>
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Note: Size and location of features shown are approximate.




-  Emergent
-  Scrub-shrub
-  150ft Buffer

0 250 500 750 1,000 ft

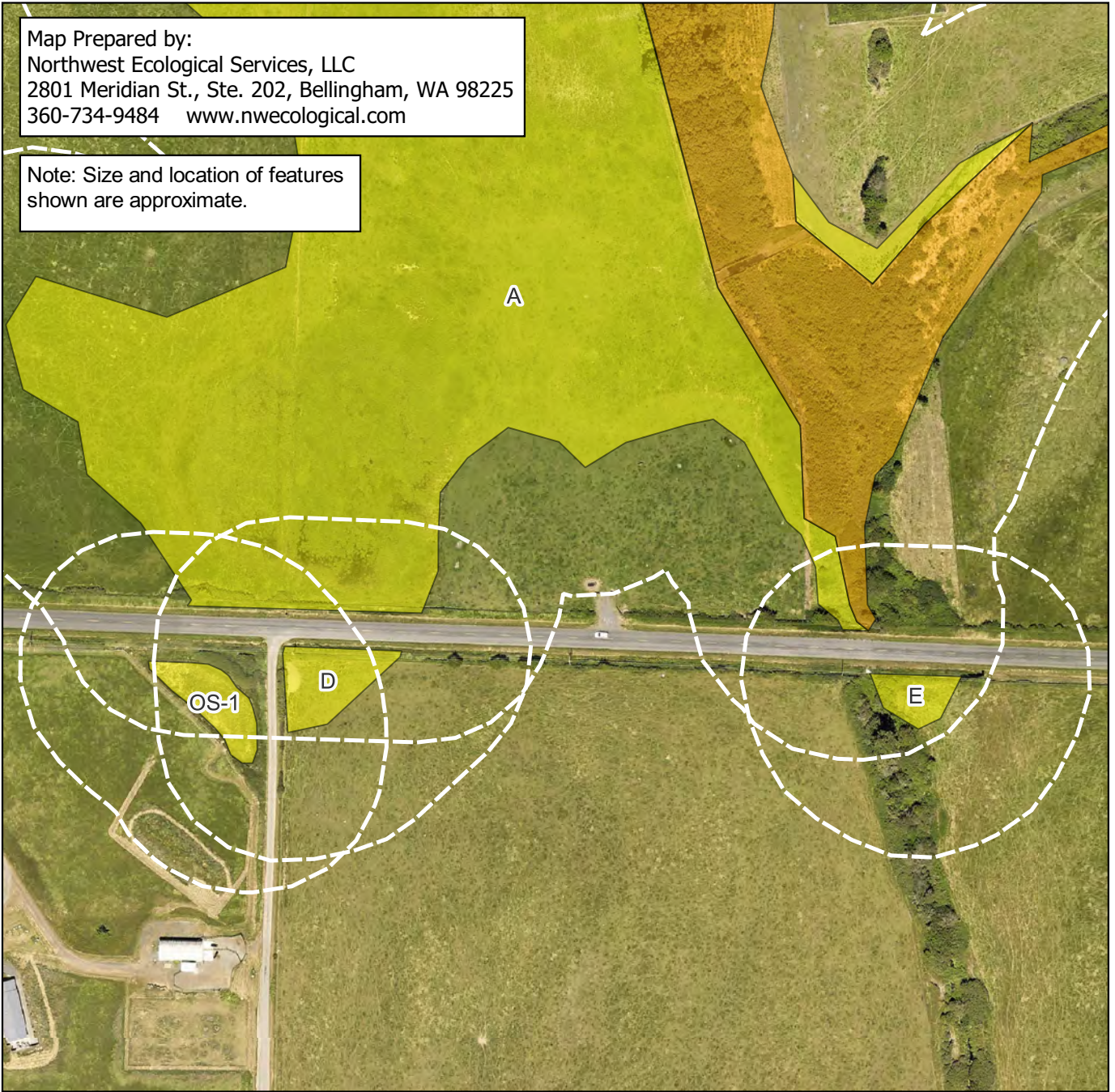





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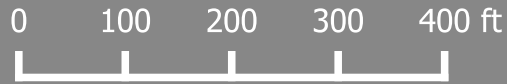
	<p>Wetland Rating Figure: Vegetation Map</p> <p>Douglas Road/ Bailer Hill Road Improvements Project San Juan County Critical Areas Assessment</p>	<p>Attachment A1</p> <p>July 2024</p>
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Note: Size and location of features shown are approximate.



-  Emergent
-  Scrub-shrub
-  150ft Buffer






Aerial Photo: SJC 2023

 <p>NORTHWEST ECOLOGICAL</p>	<p>Wetland Rating Figure: Vegetation Map</p> <p>Douglas Road/ Bailer Hill Road Improvements Project San Juan County Critical Areas Assessment</p>	<p>Attachment A2</p> <p>July 2024</p>
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Note: Size and location of features
shown are approximate.



-  Emergent
-  Unconsolidated Bottom
-  150ft Buffer

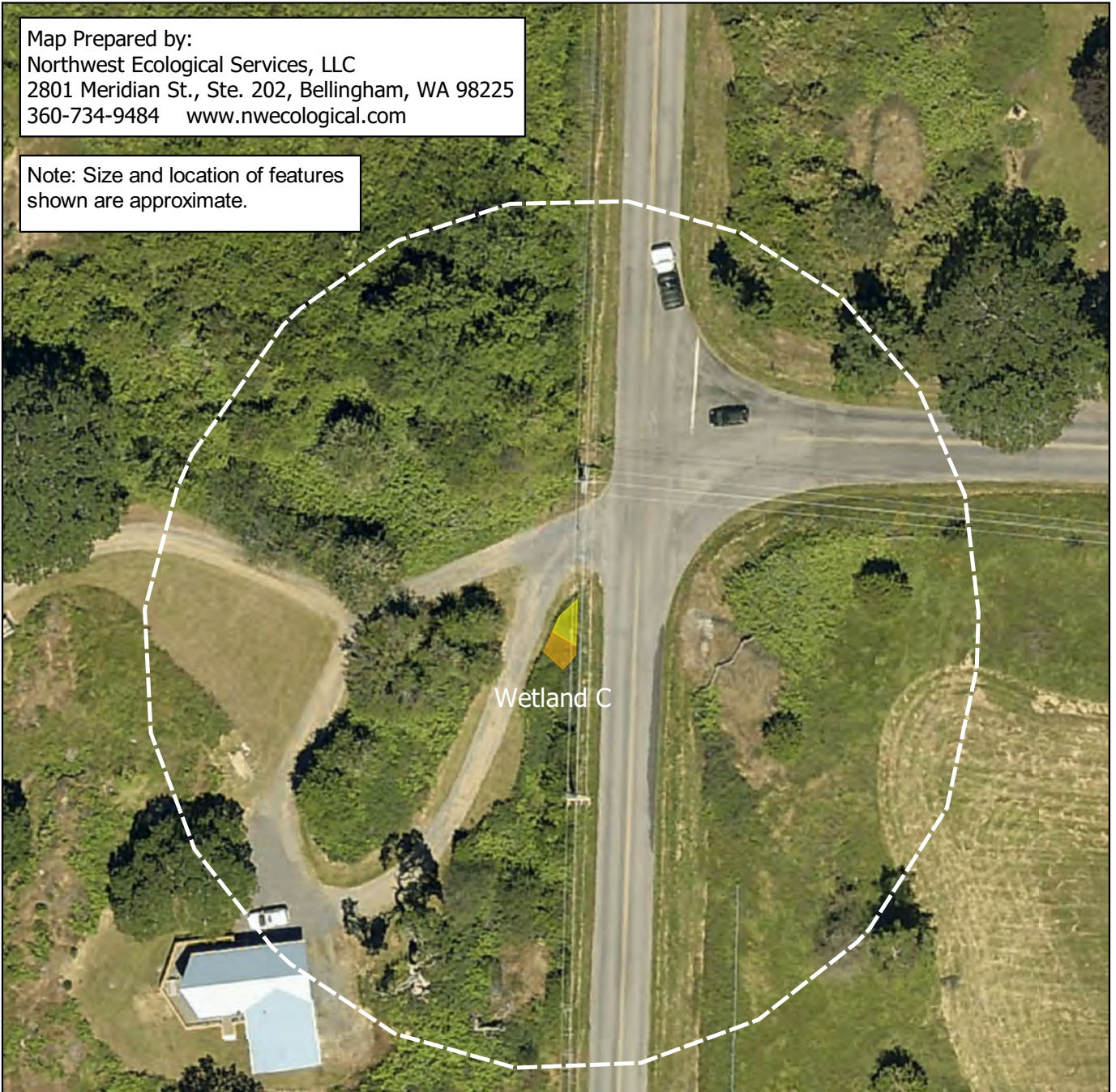


Aerial Photo: SJC 2022

	<p>Wetland Rating Figure: Vegetation Map</p> <p>Douglas Road/ Bailer Hill Road Improvements Project San Juan County Critical Areas Assessment</p>	<p>Attachment A3</p> <p>July 2024</p>
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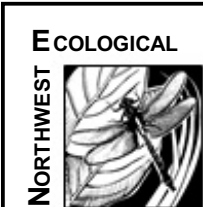
Note: Size and location of features shown are approximate.



- Emergent
- Scrub shrub
- 150ft Buffer



Aerial Photo: SJC 2022



Wetland Rating Figure: Vegetation Map

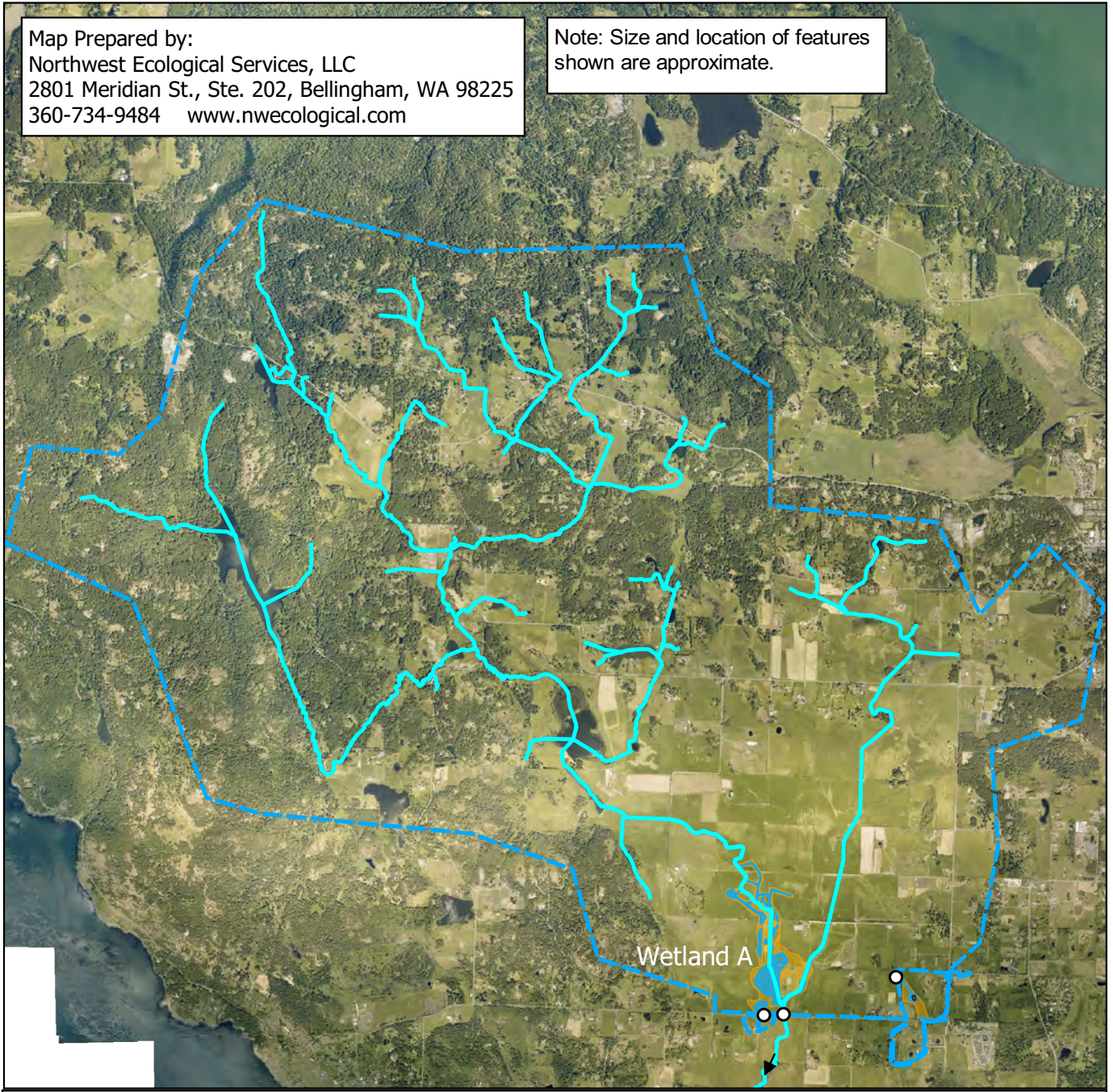
Douglas Road/ Bailer Hill Road Improvements Project
San Juan County
Critical Areas Assessment

Attachment A4

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Note: Size and location of features shown are approximate.



- Inundation
- Saturation
- Stream
- Contributing Basin
- Outlet

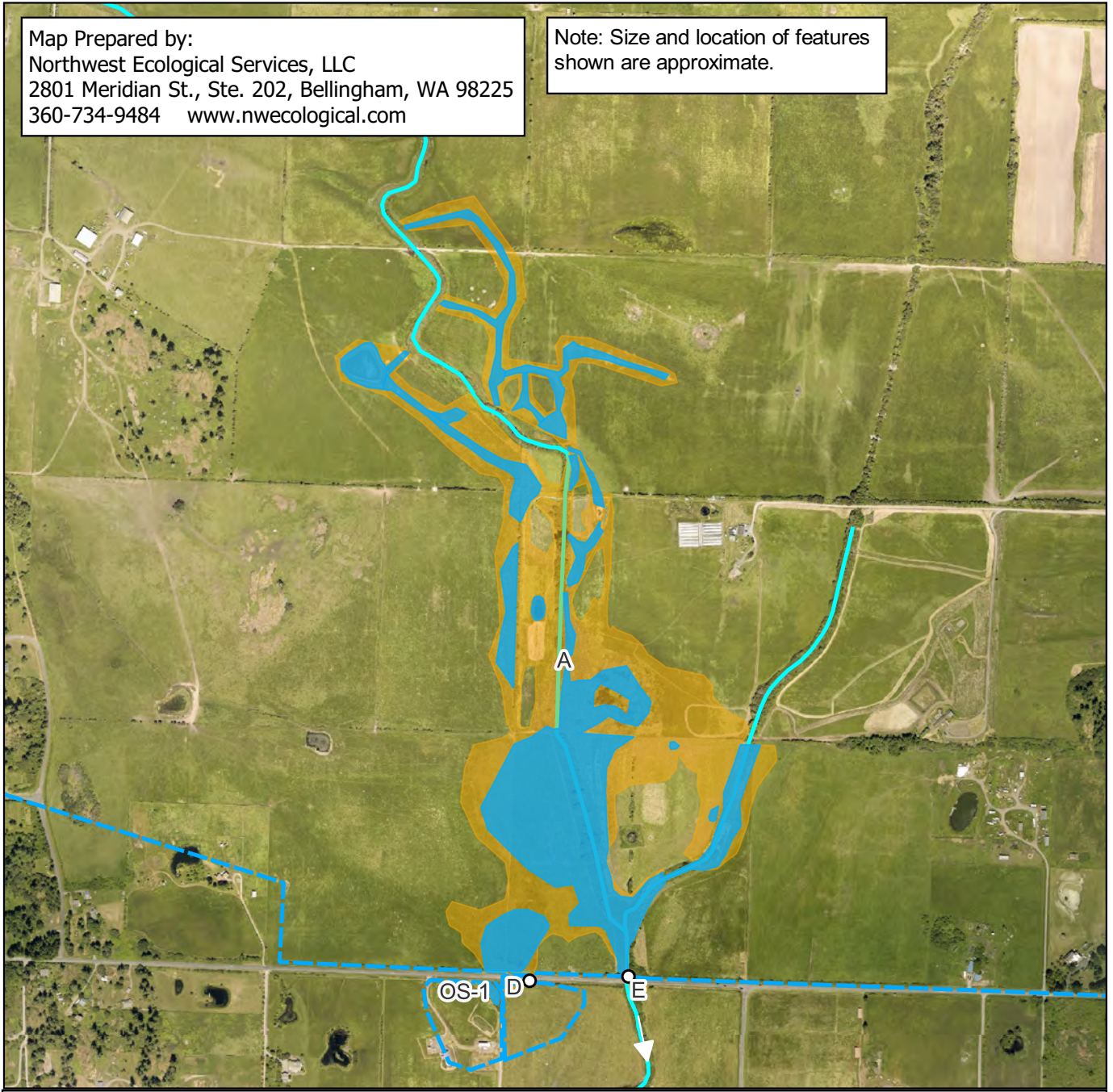


Aerial Photo: SJC 2022

	<p>Wetland Rating Figure: Hydrology Map</p> <p>Douglas Road/ Bailer Hill Road Improvements Project San Juan County Critical Areas Assessment</p>	<p>Attachment B1</p> <p>July 2024</p>
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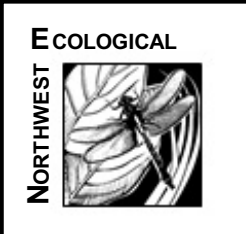
Note: Size and location of features shown are approximate.



- Inundation
- Saturation
- Stream
- Contributing Basin
- Outlet



Aerial Photo: SJC 2022



**Wetland Rating Figure:
 Hydrology Map**

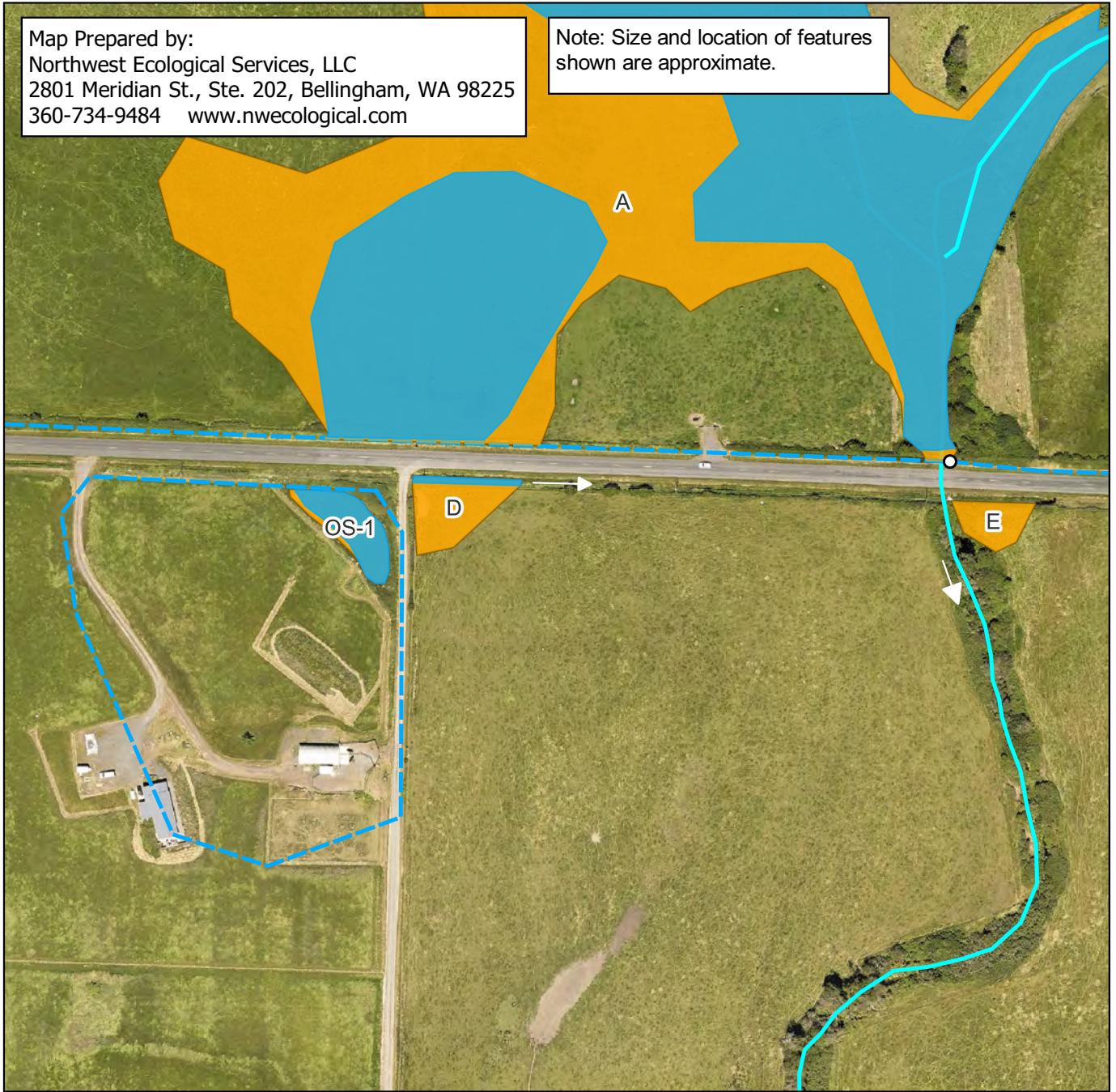
Douglas Road/ Bailer Hill Road Improvements Project
 San Juan County
 Critical Areas Assessment

Attachment B2

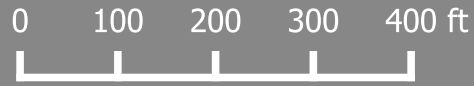
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- Inundation
- Saturation
- Stream
- Contributing Basin
- Outlet

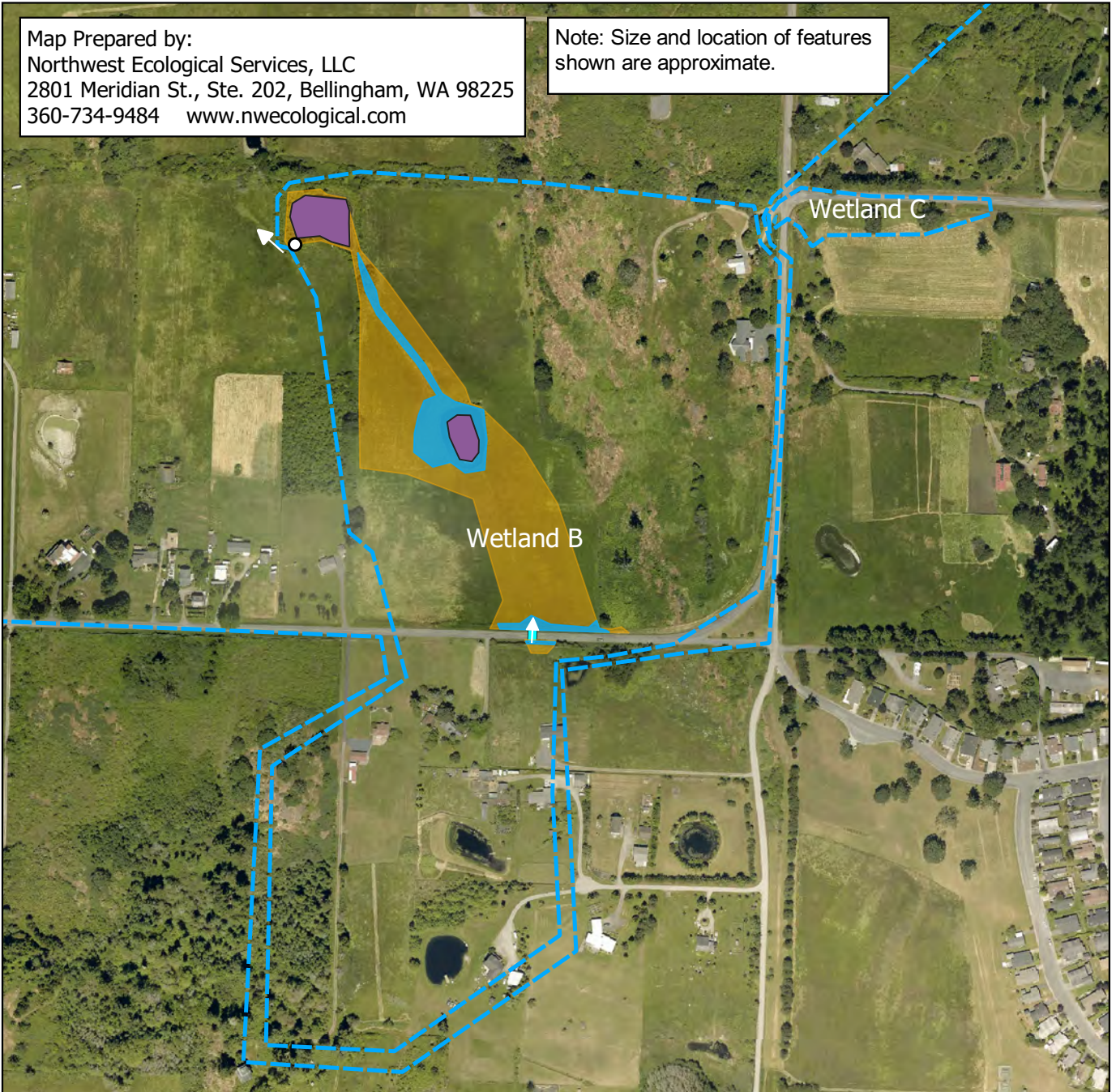


Aerial Photo: SJC 2022

	<p>Wetland Rating Figure: Hydrology Map</p> <p>Douglas Road/ Bailer Hill Road Improvements Project San Juan County Critical Areas Assessment</p>	<p>Attachment B3</p> <p>July 2024</p>
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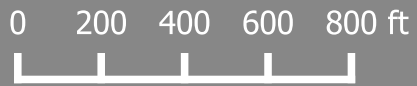
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- Inundation
- Saturation
- Contributing Basin

- Outlet
- Culvert



Aerial Photo: SJC 2022



Wetland Rating Figure: Hydrology Map

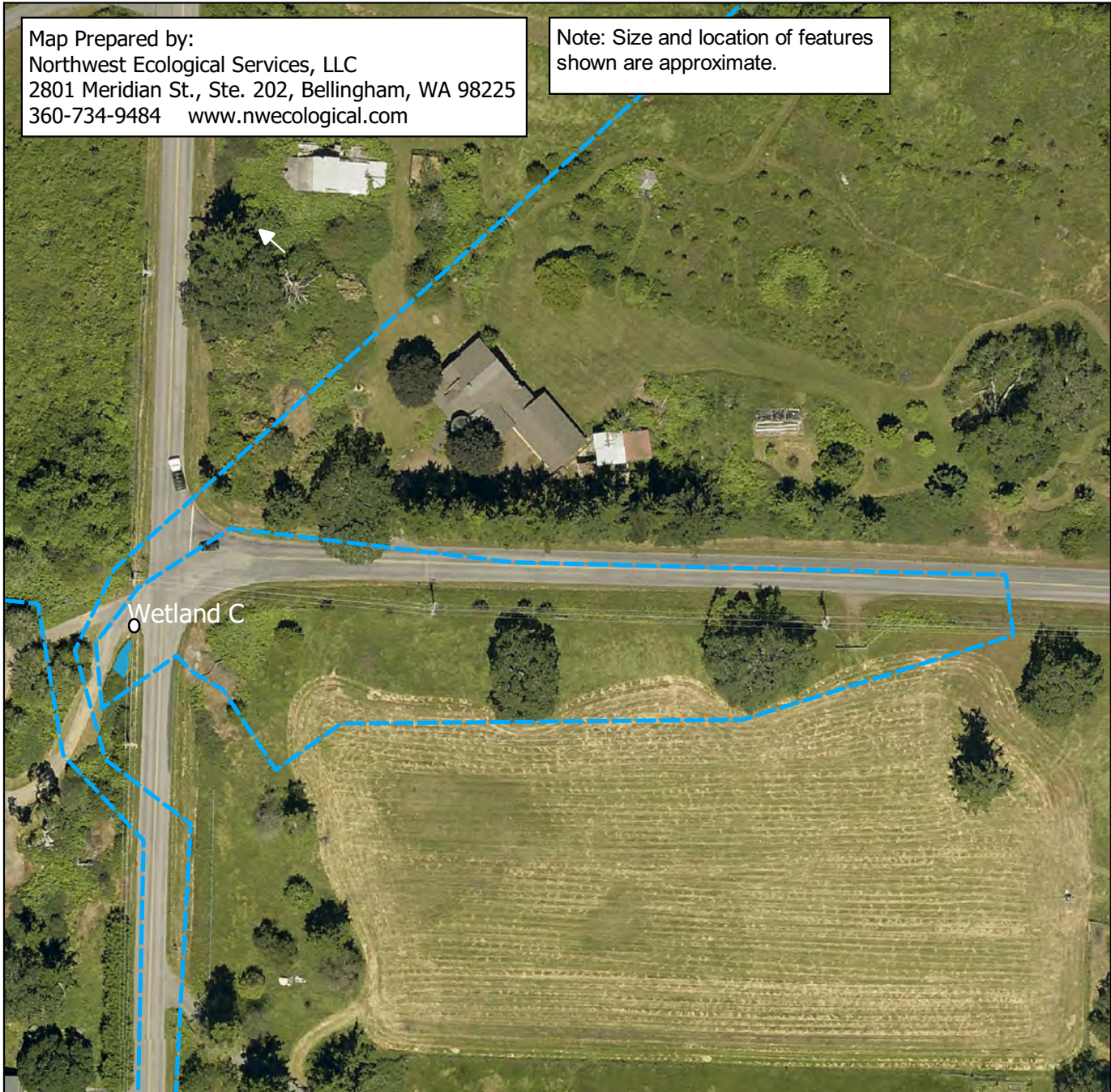
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San Juan County
Critical Areas Assessment

Attachment B4

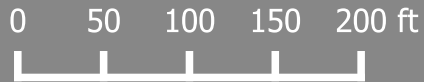
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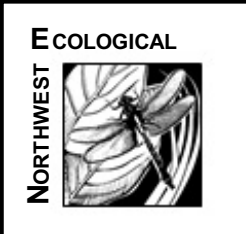
Note: Size and location of features shown are approximate.



- Inundation
- Contributing Basin
- Saturation
- Outlet



Aerial Photo: SJC 2022



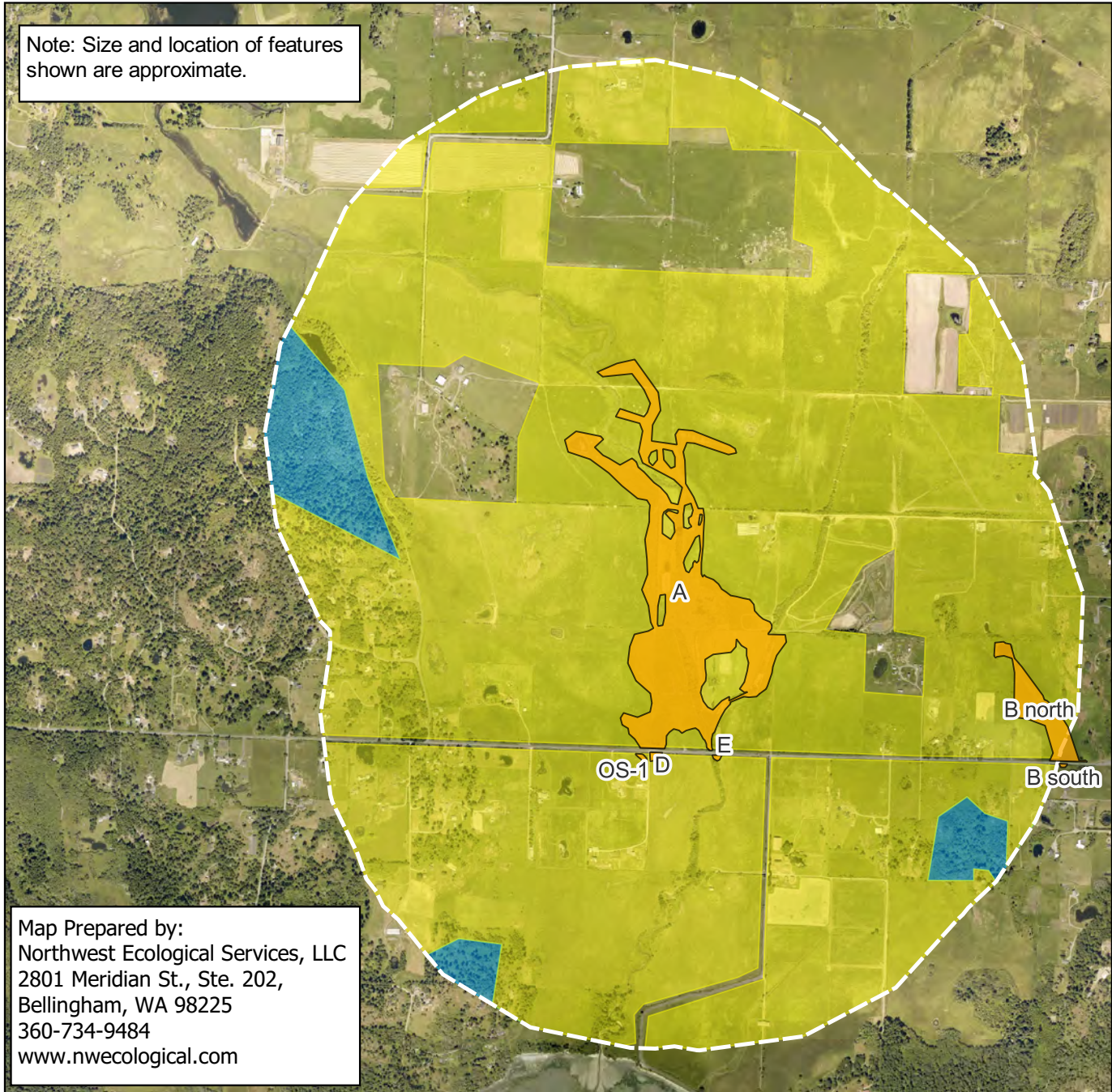
**Wetland Rating Figure:
Hydrology Map**

Douglas Road/ Bailer Hill Road Improvements Project
San Juan County
Critical Areas Assessment

Attachment B5

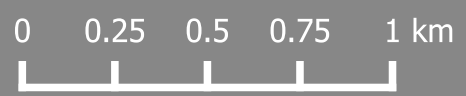
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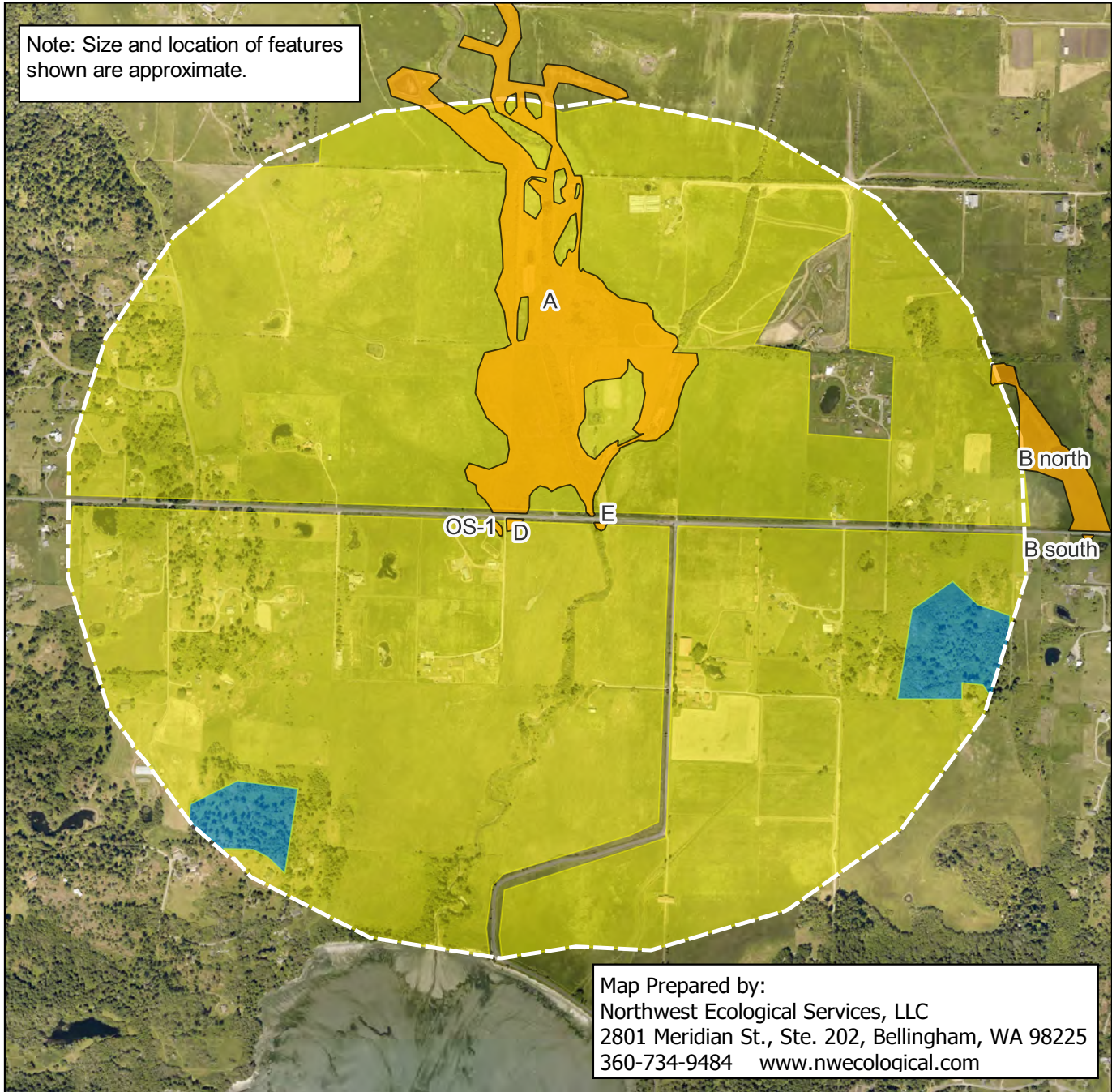
- Wetland
- 1km Rating Buffer
- Moderate/Low
- Relatively Undisturbed







Aerial Photo: SJC 2022

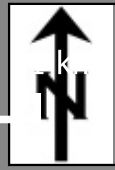
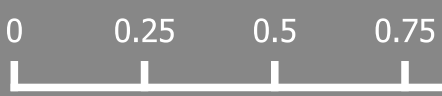
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Note: Size and location of features shown are approximate.




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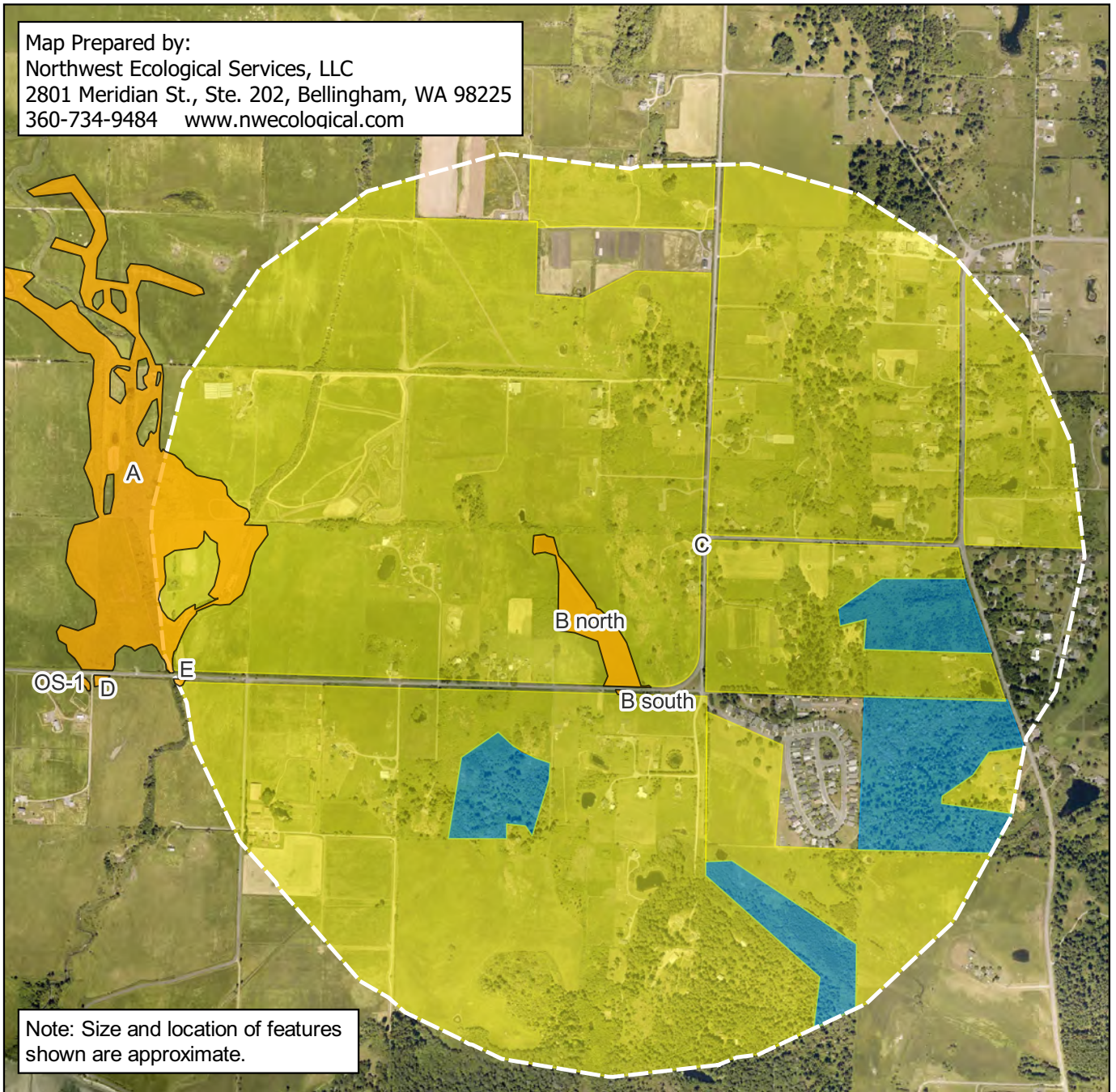
-  Wetland
-  1km Rating Buffer
-  Moderate/Low
-  Relatively Undisturbed







Aerial Photo: SJC 2022

<p>ECOLOGICAL</p> <p>NORTHWEST</p> 	<p>Wetland Rating Figure: Land Use Map</p> <p>Douglas Road/ Bailer Hill Road Improvements Project San Juan County Critical Areas Assessment</p>	<p>Attachment C2</p> <p>July 2024</p>
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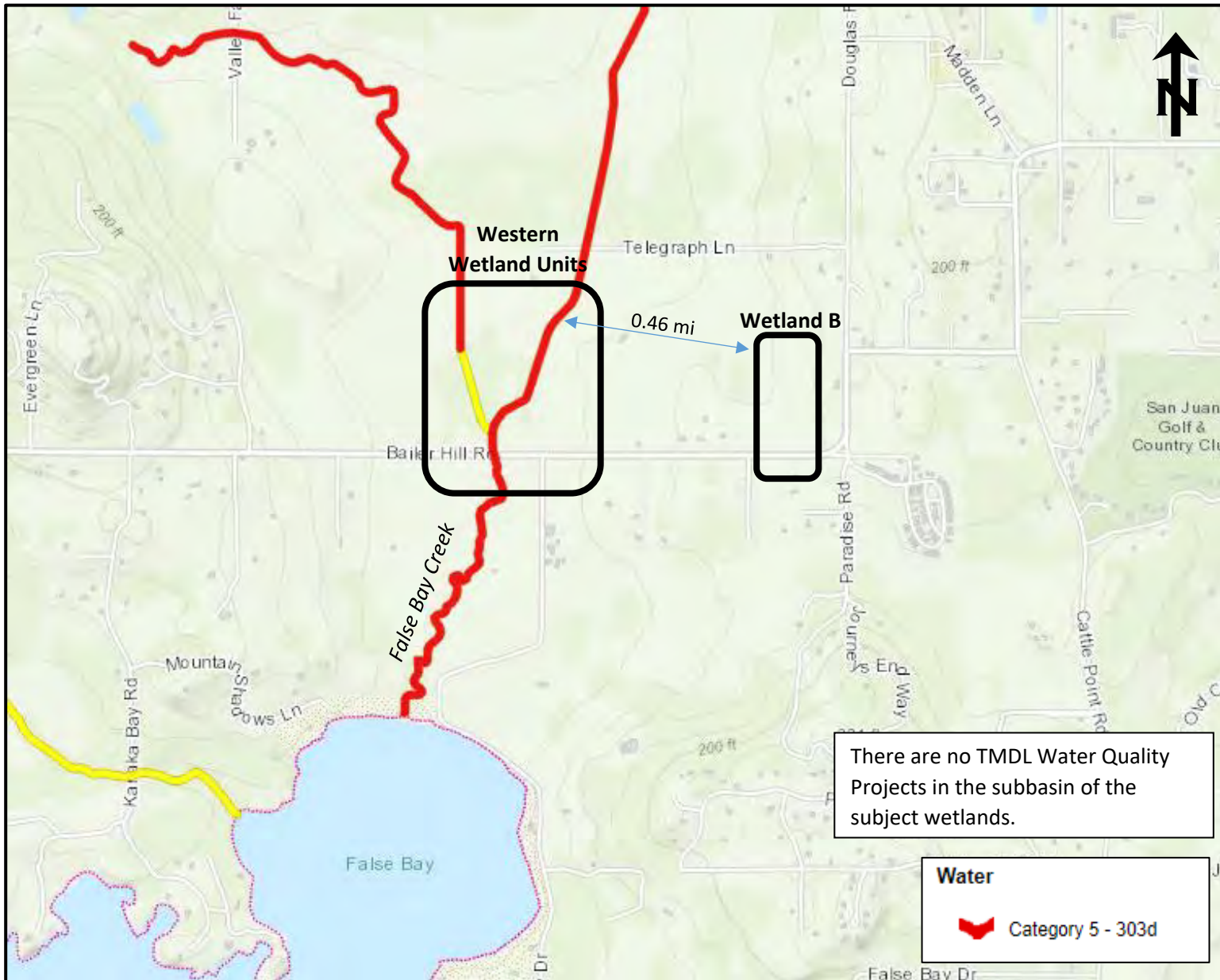
Note: Size and location of features shown are approximate.

-  Wetland
-  1km Rating Buffer
-  Moderate/Low
-  Relatively Undisturbed



Aerial Photo: SJC 2022

	<p>Wetland Rating Figure: Land Use Map</p> <p>Douglas Road/ Bailer Hill Road Improvements Project San Juan County Critical Areas Assessment</p>	<p>Attachment C3</p> <p>July 2024</p>
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<p>ECOLOGICAL</p> <p>NORTHWEST</p> 	<p>Wetland Rating Figure: Water Quality Map</p> <p>Douglas Road/ Bailer Hill Road Improvements Project San Juan County Critical Areas Assessment</p>	<p>Attachment D</p> <p>July 2024</p>
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APPENDIX F: CONSERVATION EASEMENT

PEASE

Recorded at the request of:

SAN JUAN PRESERVATION TR

on **12/31/1998** at **12:14**

Total of **17** page(s) Fee: \$ **24.00**

When recorded return to:

EXCISE TAX NOT REQUIRED
SAN JUAN CO. TREASURER
BY *[Signature]* **DEPUTY**

SAN JUAN COUNTY, WASHINGTON
SI A. STEPHENS, AUDITOR

The San Juan Preservation Trust
Box 327
Lopez Island, WA 98261

JR

DOCUMENT TITLE: **GRANT DEED OF CONSERVATION EASEMENT**
GRANTOR: **ROBERT W. DORAN and EVELYN M. DORAN, husband and wife**
GRANTEE: **THE SAN JUAN PRESERVATION TRUST**
ABBREVIATED LEGAL DESCRIPTION: **SE 1/4 of NE 1/4, S 28,T 35N, R2WWM**
FULL LEGAL DESCRIPTION: **PAGE 14**
ASSESSOR'S TAX PARCEL NUMBERS: **352814001**

GRANT DEED OF CONSERVATION EASEMENT

This Grant Deed of Conservation Easement, by and between ROBERT W. DORAN and EVELYN H. DORAN, husband and wife (hereinafter referred to as "Grantor"), and THE SAN JUAN PRESERVATION TRUST, a Washington non-profit corporation (hereinafter referred to as "Grantee"), is made with reference to the following facts:

1 RECITALS

1.1 Grantor is the owner in fee of that certain real property (hereinafter the "Protected Property"), situated on San Juan Island in San Juan County, State of Washington, more particularly described in Exhibit "A" and shown on Exhibit "B", both of which are attached and made a part hereof by this reference.

1.2 The Protected Property is part of a significant coastal ecosystem, the San Juan Islands, which is relatively intact and undeveloped. The Protected Property includes 39.09 acres, including open agricultural fields, a seasonal stream which runs through the land, and wetlands. The Protected Property

possesses significant scenic and open-space values and is part of San Juan Valley, one of the highest valued landscaped units in the San Juan County Open Space and Conservation Plan. The soils of the Protected Property are classified as prime agricultural soils. In addition to its agricultural and wetland values, this acreage provides open views northward across San Juan Valley and is habitat for migratory waterfowl and foraging raptors. The Protected Property includes 1320 feet of frontage on Bailer Hill Road. The Protected Property adjoins other San Juan Valley properties which are protected by conservation easements.

1.3 The Protected Property's ecological, agricultural, scenic, and open-space values are of importance to Grantor, Grantee, and the people of San Juan Island, San Juan County, and the State of Washington. The Protected Property enhances the rural character of San Juan Island and provides views across open valley fields that can be enjoyed by the public from Bailer Hill Road.

1.4 The goals and policies of the San Juan County Comprehensive Plan provide for the protection of the natural beauty and resources of the islands, maintenance of the present rural and open space character, and respect for the natural environment. The Plan specifically intends that agricultural, timber lands open space, and shorelands be protected from urban and suburban forms of development, and it encourages the preservation of scenic resources and renewable natural resources for the benefit of existing and future generations. A specific goal of the Plan is to preserve, maintain, and protect open space and scenic corridors through sound management and public education.

1.5 The legislatively declared policies of the State of Washington, in the Revised Code of Washington (hereinafter "RCW") Chapter 84.34, provide that it is in the best interest of the state to maintain, preserve, conserve, and otherwise continue in existence, adequate open-space lands and to assure the use and enjoyment of natural resources, and scenic beauty for the economic and social well-being of the state and its citizens. The Protected Property is officially designated as "farm and agricultural land," pursuant to RCW 84.34.

1.6 In the absence of this Grant Deed of Conservation Easement, the Protected Property could be developed in the future for residential and other uses in a manner which would destroy the open space, scenic, agricultural, and natural character of the Protected Property and its ecological value.

1.7 Grantor, as the owner of the Protected Property, possesses the affirmative right to identify, preserve, and protect in perpetuity the natural elements and processes and the ecological, woodland, scenic and open space value of the Protected Property, and desires to transfer such rights to the Grantee.

1.8 Grantee is a "non-profit nature conservancy corporation" as defined by RCW 64.04.130 and RCW 84.34.250, and described in Section 170(b)(1)(A)(vi) and (h)(3) of the Internal Revenue Code of 1986 (hereinafter "IRC").

2 CONVEYANCE AND CONSIDERATION

2.1 For the reasons stated above, and in consideration of the mutual covenants contained herein, the Grantor does hereby convey and warrant to Grantee a perpetual Conservation Easement, consisting of the rights in the Protected Property hereinafter enumerated, subject only to the restrictions set forth herein.

2.2 This conveyance is a conveyance of an interest in real property under the provisions of RCW 64.04.130, and is made as an absolute, unconditional, unqualified, and completed gift subject only to the mutual covenants and restrictions hereinafter set forth, and for no other consideration whatsoever.

3 PURPOSE

3.1 It is the exclusive purpose of this Conservation Easement to preserve and protect the scenic, open-space, agricultural, and natural character, the seasonal streambed, and the open view corridor over and across the Protected Property, together the "Conservation Values", and to prohibit structures, except fences, on the Protected Property. To this end, Grantor and Grantee agree that the Baseline Data consisting of maps, photographs, and other documentation on file at the offices of Grantee and already provided to Grantee by Grantor provide, collectively, an accurate representation of the Protected Property at the time of this Grant and are hereby incorporated by this reference. Grantor and Grantee further agree that within twelve (12) months of the execution hereof, a collection of additional Baseline Data may be compiled by Grantee, attached hereto as an exhibit, and incorporated herein by this reference. The

Baseline Data shall be relied upon by the Grantor and the Grantee as the descriptive base to establish the present condition and guide in the future uses of the Protected Property. Failure to timely compile the additional Baseline Data shall not affect the enforceability or validity of any other provision hereof.

3.2 Grantor and Grantee intend that the Protected Property shall not be converted nor directed to any uses other than those provided herein.

3.3 Unless specifically provided, nothing contained herein shall be construed as affording to the general public access to any portion of the Protected Property subject to this Conservation Easement.

4 GRANTEE'S RIGHTS

4.1 The rights conveyed to Grantee by this Conservation Easement are the following:

4.1.1 The Grantee shall have the right to identify, to preserve and protect in perpetuity, and to maintain the Conservation Values, the scenic, open-space, agricultural, and natural character, the seasonal streambed, and the open view corridor over and across San Juan Valley, for the scenic enjoyment and benefit of the general public.

4.1.2 The Grantee shall have the right to enter upon the Protected Property annually, upon prior written notice to the Grantor, for the purpose of making a general inspection to assure compliance with this Conservation Easement.

4.1.3 The Grantee and other persons approved by the Grantor, may enter upon the Protected Property, upon prior arrangement with Grantor, for educational, scientific and biological purposes to observe and study the Protected Property, or for other purposes allowed by Grantor consistent with this Conservation Easement.

4.1.4 The Grantee shall have the right to enter upon the Protected Property, at such other times as are necessary to avoid substantial harm to the purposes of this Conservation Easement if there is reason to believe that a violation of the Conservation Easement is occurring, and under conditions which do not reasonably permit advance written

notification to Grantor, for the purposes of enforcing the provisions of this Conservation Easement.

4.1.5 The Grantee shall have the right to enjoin any activity on, or use of, the Protected Property which is inconsistent with this Conservation Easement, and undertake or cause to be undertaken the restoration of such areas or features of the Protected Property as may be damaged by activities contrary to the provisions hereof.

4.1.6 The Grantee shall have the right, during the annual inspection, to place and replace small markers to identify the boundaries and corners of the Protected Property.

4.1.7 The Grantee shall be notified by Grantor, in writing, before Grantor exercises any reserved right, the exercise of which may have an adverse impact on the Conservation Values of the Protected Property.

4.1.8 The Grantee shall have the right to enter upon and mow the open fields of the Protected Property, at Grantee's option and expense, and upon thirty (30) days prior written notice to Grantor, if there is reason to believe that the Protected Property is not agricultural use or the open space character of the fields and view corridor over the land may be disappearing.

4.1.9 The Grantor hereby grants to Grantee all development rights, except as reserved in Section 5 below, that are now or hereafter allocated to, implied, reserved, or inherent in the Protected Property; and Grantor and Grantee agree that such rights are terminated and extinguished, and may not be used on or transferred to any portion of the Protected Property as it now or hereafter may be bounded or described, or to any other property adjacent or otherwise, nor used for the purpose of calculating permissible lot yield of the Protected Property or any other property.

4.2 Enforcement of the terms and conditions of this Conservation Easement shall be at the discretion of the Grantee, in accordance with Section 7 below. Any forbearance on its behalf to exercise its rights hereunder in the event of any breach of this Conservation Easement by Grantor, its heirs, successors or assigns, or any other person or entity, shall not be deemed or construed to be a waiver of the Grantee's rights hereunder in the event of any subsequent breach.

5 **PERMITTED USES** Grantor reserves the right to use the Protected Property for all uses which are consistent with the purposes of this Conservation Easement, including the following uses;

5.1 To use, maintain, repair, reconstruct, or replace fences on the Protected Property.

5.2 To raise agricultural crops and raise livestock on the Protected Property as permitted by county statutes.

5.3 To manage the wetlands and seasonal stream on the Protected Property in a manner to restore natural runs of native trout and other fish species and to enhance other natural wetland and stream values in accordance with currently accepted stream and wetlands management practices. Grantor shall notify Grantee, in writing, prior to carrying out any said management activity.

5.4 To remove noxious weeds to preserve the Conservation Values on the Protected Property.

5.5 To manage the Protected Property as "farm and agricultural land" pursuant to RCW 84.34.

5.6 To manage the land in a manner to preserve the Conservation Values of the Protected Property.

6 **PROHIBITED USES** The following uses and practices on the Protected Property are inconsistent with the purposes of this Conservation Easement and shall be prohibited; however, this is not an exhaustive recital of all of those uses and practices which are prohibited as inconsistent with the purposes of the Conservation Easement:

6.1 The change, disturbance, alteration, or impairment of the Protected Property, except as provided in Section 5 or elsewhere herein and as necessary to maintain the agricultural uses, the view corridor across San Juan Valley, and the Conservation Values of the Protected Property.

6.2 The construction or placement of any structures on the Protected Property, except fences.

6.4 The division, subdivision or **de facto** subdivision of the Protected Property.

6.5 Change in the topography of the land through the placing of soil, dredging spoils, or other material on the Protected Property, except for stream or wetlands management as provided for in Section 5 above.

6.6 Filling, dredging, mining, drilling, or removal of topsoil, sand, gravel, rock, minerals or other materials, except for stream or wetlands management as provided for in Section 5 above..

6.7 The construction or placement of commercial signs, billboards, or other commercial advertising material on the Protected Property, except for small signs designating its conservation status.

6.8 The dumping of used vehicles, old machinery, or other unsightly or offensive material on the Protected Property.

6.9 Overnight commercial or public camping on the Protected Property.

6.10 The operation of motorcycles, dune buggies, or other types of noisy motorized vehicles for recreational use on the Protected Property.

6.11 The placement of new overhead utility wires on the Protected Property.

6.12 The use or transfer of any development rights that are now or hereafter allocated to, implied, reserved, or inherent in the Protected Property to any other property.

7 **REMEDIES**

7.1 If a dispute arises between the Grantor and the Grantee concerning either the consistency of any proposed action, activity, or use with the purpose of this Conservation Easement or any other circumstances not provided for in Section 7.2 below, the parties shall meet together to discuss the dispute and attempt resolution.

7.2 Irrespective of any other remedies provided for Grantee, Grantee may, following reasonable written notice to Grantor, institute suits or actions to enjoin any violation of this agreement by injunction, including prohibitory and/or mandatory injunctive relief, and to require the restoration of the premises to the condition and appearance required under this Conservation Easement. Further, as permitted by law, representatives of Grantee may, following reasonable written notice to Grantor, enter upon the Protected Property and correct any violations and hold Grantor, its heirs, successors and assigns, or third parties disconnected from Grantor, responsible for the cost thereof.

7.3 Should any person or entity, including the Grantor, its heirs, successors or assigns, or third parties connected to Grantor, undertake any activity in

violation of the terms of this Conservation Easement, the Grantee shall have the right to force the restoration of that portion of the Protected Property affected by such activity to the condition that existed prior to the undertaking of such unauthorized activity. In such case, the costs of such restoration and the Grantee's expenses shall be borne by Grantor or those of its heirs, successors, or assigns against whom a judgment is entered, or, in the event that the Grantee secures redress without initiating or completing a judicial proceeding, by Grantor or those of its heirs, successors, or assigns who are otherwise determined to be responsible for the unauthorized activity.

7.4 Should the ownership of the Protected Property become vested in more than one heir, successor or assign of the Grantor, and should one or more heir, successor, or assign, or third parties connected to Grantor, undertake any activity in violation of the terms of this Conservation Easement, the Grantor or any other heir, successor or assign shall have the right to force the restoration of that portion of the Protected Property affected by such undertaking to the condition that existed prior to the undertaking of such unauthorized activity, in the event the Grantee elects not to exercise the remedy provided for in Sections 7.2 and 7.3. In such case, the costs of such restoration and the expenses of the Grantor or the heir, successor or assign that forces the restoration shall be borne by those such heirs, successors or assigns against whom a judgment is entered, or, in the event that the heir, successor or assign forcing the restoration secures redress without initiating or completing a judicial proceeding, by those heirs, successors or assigns who are otherwise determined to be responsible for the unauthorized activity.

7.5 Notwithstanding any other provisions herein, nothing contained in this Conservation Easement shall be construed to entitle Grantee to bring any action against Grantor to abate, correct, or restore any condition on the Protected Property or to recover damages for any injury to or change in the Protected Property resulting from causes beyond Grantor's control other than the Grantor's own acts, including, but not limited to, fire, flood, storm, insect infestation, and earth movement, actions taken by third parties disconnected from Grantor, or from prudent action taken by Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the Protected Property resulting from such causes.

8 **SUCCESSION** The benefits of this Conservation Easement shall be assignable but only to a qualified organization within the meaning of Section 170(h)(3) of the IRC which is organized or operated primarily or substantially for one of the conservation purposes specified in Section 170(h)(4)(A) of the IRC. Any assignment of benefits by the Grantee (or successors) must require the transferee to carry out the purposes of this Conservation Easement. The Grantee shall notify the Grantor, in writing, at the Grantor's last known address, in advance of such assignment. If at any time it becomes impossible for the Grantee to ensure compliance with the covenants contained herein and the Grantee has not named a successor or successor organization, or the Grantee shall cease to exist, then its rights and duties hereunder shall become vested in and fall upon the following-named entities provided that such entities accept this Conservation Easement and are then organizations meeting the requirements of Section 170(h)(3) of the IRC (or its successor statute), in the following order:

- (1) The Nature Conservancy, a District of Columbia non-profit corporation, having its principal office at 1815 North Lynn Street, Arlington, VA 22209;
- (2) Such other entity as may have been formed for purposes similar to The San Juan Preservation Trust, constituting a "qualified organization" within the meaning of the Internal Revenue Code of 1986 (or its successor provision).

9 **TAXES AND EXPENSES**

9.1 Grantor agrees to pay any and all real property taxes and/or assessments levied by competent authority on the Protected Property. If Grantee is ever required to pay any taxes or assessments on its interest in the Protected Property, Grantor shall reimburse Grantee for the same.

9.2 Grantor shall bear all the costs of maintenance of the Protected Property, and does hereby indemnify the Grantee therefrom, except for costs which Grantee may incur in the exercise of Grantee's rights under Section 4.1.8 above.

10 **PROPORTIONATE VALUE; EMINENT DOMAIN**

10.1 The Grantor and the Grantee agree that the donation of the Conservation Easement gives rise, for purposes of this paragraph, to a property right immediately vested in the Grantee, with a fair market value that is at least

equal to the proportionate value that the Conservation Easement, determined at the time of the gift, bears to the value of the Protected Property at that time as determined by the appraisal used by Grantor for federal income tax purposes, or, if there is no said appraisal, then the parties shall designate such proportionate value by exhibit to this easement prior to execution. That proportionate value of the Grantee's property rights shall remain constant. If a change in conditions surrounding the Protected Property makes impossible or impracticable the continued use of the Protected Property for conservation purposes, and gives rise to extinguishment of this Conservation Easement by judicial proceedings, the Grantee, on a subsequent sale, exchange or involuntary conversion of the Protected Property, shall be entitled to a portion of the proceeds at least equal to that proportionate value of the Conservation Easement. The Grantee shall use its share of the proceeds in a manner consistent with the conservation purposes set forth herein.

10.2 If ever all or part of the Protected Property is taken in exercise of eminent domain by public, corporate, or other authority so as to abrogate the restrictions imposed by this Conservation Easement, the Grantor and the Grantee shall join in appropriate actions at the time of such taking to recover the full value of the taking and all incidental or direct damages resulting from the taking; all expenses incurred by the Grantor and the Grantee in this action shall be paid out of the recovered proceeds.

- 11 **WARRANTY AGAINST TOXIC SUBSTANCES** Grantor hereby represents and warrants to Grantee that Grantor has never caused or placed toxic substances on or under the Protected Property and has not received any notice concerning the placement or presence of any toxic substances on or under the Protected Property in violation of any federal or state law or regulation.
- 12 **COVENANTS** It is the express intent of the Grantor and Grantee that the provisions of this Conservation Easement shall run with and burden title to the Protected Property in perpetuity, and shall be binding upon and inure to the benefit of the heirs, successors, and assigns of the parties hereto.

13 **"GRANTOR" - "GRANTEE"** The terms "Grantor" and "Grantee", wherever used herein, and any pronouns used in place thereof, shall be held to mean and to include, respectively the above-named Grantor, and heirs, successors, personal representatives, and assignees of said Grantor, and each of them, and the above-named Grantee, its successors and assigns.

14 **SEVERABILITY** In the event that any provision of this grant or the application thereof to any person or circumstance shall be determined to be invalid or unenforceable, the remainder of the provisions hereof, and the application of such provisions to persons or circumstances other than those as to which it is determined to be invalid, shall not be affected thereby.

15 **SUBSEQUENT TRANSFERS** Grantor agrees to incorporate the terms of this Easement in any deed or other legal instrument by which they divest themselves of any interest in all or a portion of the Protected Property, including without limitation, a leasehold interest, and shall notify Grantee in writing of any transfer. The failure of Grantor to perform any act required by this paragraph shall not impair the validity of this Easement or limit its enforceability in any way.

16 **NOTICES** All notices required or permitted to be given under the terms of this Conservation Easement shall be in writing and addressed as set forth below:

16.1 All notices to be given to Grantor shall be addressed as follows:

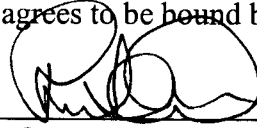
Robert and Evelyn Doran
25 Jefferson Road
Chestnut Hill MA 02467

16.2 All notices to be given to the Grantee shall be addressed as follows:

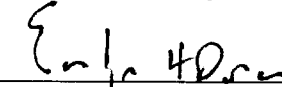
The San Juan Preservation Trust
Box 327
Lopez Island, WA 98261

Either Grantor or Grantee may, by proper notice to the other, designate another address for the giving of notices. All notices shall be deemed given on the third day following the day the notice is mailed in accordance with this Section 17.

IN WITNESS WHEREOF, the undersigned Grantor has executed this instrument this 28th day of December, 1998, and agrees to be bound by the conditions hereof.



ROBERT W. DORAN



EVELYN H. DORAN

Unofficial
Copy

State of massachusetts)
)ss.
County of Suffolk)

On this day, personally appeared before me ROBERT W. DORAN, to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 28th day of December, 1998.

JEAN MANNING LYNCH
Notary Public
My Commission Expires
September 23, 2005

Jean Manning Lynch
Jean Manning Lynch
(Printed Name)

Notary Public in and for said state, residing



My commission expires: Sept. 23, 2005

12/24/98 cedoran2

On this day, personally appeared before me EVELYN H. DORAN, to me known to be the individual described in and who executed the within and foregoing instrument, and acknowledged that she signed the same as her free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this 28th day of December, 1998.

JEAN MANNING LYNCH
Notary Public
My Commission Expires
September 23, 2005

Jean Manning Lynch
Jean Manning Lynch
(Printed Name)

Notary Public in and for said state, residing



My commission expires: Sept. 23, 2005

12/24/98 cedoran2

EXHIBIT "A"

Legal Description of the Protected Property

The Southeast quarter of the Northeast quarter of Section 28, Township 35 North, Range 3 West, W.M.;

EXCEPT County Road conveyed to San Juan County under Auditor's File No. 50452, records of San Juan County, Washington..

SUBJECT TO easements and restrictions of record.

Unofficial
Copy

EXHIBIT "B"

**Map of Property Showing
Property Protected by the Conservation Easement
(not to scale)**

Unofficial
Copy

APPENDIX G: LONG TERM MANAGEMENT PLAN

**DOUGLAS/BAILER HILL ROADS MITIGATION PROJECT
LONG TERM MANAGEMENT PLAN (CORPS REF#_____)**

Long term management of mitigation provided for the loss of 0.147 ac of Category II and III wetland and 0.181 of buffer.

Responsible Party: The Party responsible for the long term maintenance and care of the mitigation site is San Juan County. If responsibility is transferred to another party, the U.S. Army Corps of Engineers (Corps), Seattle District, Regulatory Branch will be notified of, and approve, the transfer prior to enactment.

Please mail copies of this form to: USCOE Seattle District Regulatory Branch PO Box 3755, Seattle, WA 98127-3755.

Schedule for site inspections: Informal site inspections will occur periodically. Formal site inspections will occur every five years after completion of the required five years of monitoring.

Reporting schedule: The Responsible Party will submit a status report to the Corps every five years. This will include the Corps Permit Reference number and a brief description of the condition of the mitigation area. However, if significant incidents occur between the regular reporting periods the Corps will be contacted.

Management/maintenance activities: Management/maintenance activities will include:

- Mitigation site planting areas will be inspected to insure the stability of at least 1.468 ac of PSS/PFO wetland remains unharmed.
- Maintenance activities will be undertaken if significant human damage has resulted (e.g., unauthorized human encampments will be removed, large amounts of trash/debris will be removed).
- Visual observation to determine if signage is in place.

Site Visit Date:

Site Visit Performed by:

Site visit notes:

Condition of wetland vegetation:

Good Some Disturbance Planting Recommended

Notes:

Condition of installed vegetation:

Good Some Disturbance Planting Recommended

Notes:

Signage in good condition: YES NO Repairs Made

Notes:

Disturbance observed (check the site for trash, encampments, other human disturbance):

NO YES (note type below) Disturbance Rectified

Notes:

Other site visit notes:

Funding mechanisms: These actions will be funded by the Responsible Party.

POLICY UPDATE: WETLAND MITIGATION ON CONSERVATION LAND BANK PROPERTIES

The San Juan County Conservation Land Bank (Land Bank) has been asked by other county departments to allow wetland mitigation projects on its preserves. More requests are anticipated in the future as public infrastructure projects, associated with improvements and/or repairs to road networks, are designed. At first glance, wetland mitigation projects on preserves may appear beneficial in that mitigation funds may provide opportunities to enhance habitat or function within degraded areas. However, mitigation on protected public lands can also be problematic.

Important factors to consider prior to allowing mitigation on public, protected lands include:

- Mitigation on lands already in conservation status does not meet the State’s expressed goal to achieve a “no-overall-net loss” of wetland habitats.¹
- Mitigation is often a short-term investment and funding for maintenance typically extends only until a project is ‘released’ by the regulatory agency. Regulatory agencies have found that the cost of ensuring that mitigation is successful over the long term is routinely underestimated.²
- Mitigation results in title encumbrances; encumbrances can reduce the value of a publicly owned property and limit the scope and scale of future restoration work.
- Mitigation on a preserve, and the resulting title encumbrance, may disqualify the Land Bank from future grant awards that could yield greater ecological benefits than any compensatory project.

For these reasons, the Land Bank Commission (Commission) proposes to update its 2012 wetland mitigation policy and establish clearer criteria for future projects. The policy update incorporates regulatory advances and seeks to ensure that the true costs of mitigation are accounted for and made clear to county residents.

Among the new requirements are stipulations that mitigation projects must be effective for the duration of the development’s impacts on the affected resources (durability); assure that the action leads to benefits that would not have otherwise accrued (additionality); and provide benefits equal to or greater than what is lost (equivalency).³

The Commission will consider requests to accommodate wetland mitigation projects for San Juan County on a case-by-case basis. The following criteria must be met for a project to qualify as concurrent mitigation and receive Commission approval.

¹ <https://ecology.wa.gov/Water-Shorelines/Wetlands/Mitigation>.

² Common problems associated with short-term investments include inadequate design, failure to implement the design, and site infestation by exotic species. The poor performance of many mitigation projects and the subsequent need to improve outcomes led regulators to develop [advance permittee-responsible compensatory mitigation](#).

³ <https://mitigationbankingconference.com/wp-content/uploads/2020/02/Compensatory-Mitigation-on-Federal-Lands.pdf>

REQUIREMENTS

1. The project requiring mitigation must be clearly in the public interest.
2. The proposed mitigation plan must demonstrate durability, additionality and equivalency.
3. The regulatory agencies must deem that the Land Bank preserve is ecologically preferable to alternative sites or plans.
4. The project sponsor must obtain an agreement with the Land Bank that:
 - a. Provides compensation for the loss in fair market value of the property resulting from the title encumbrance.
 - b. Establishes the project sponsor's financial and legal responsibility for all permitting, construction, maintenance, monitoring and reporting necessary to meet mitigation performance standards, and any other requirements. Sponsor is also responsible for removing all fencing or caging installed to protect wetland vegetation upon final sign-off by Ecology or when both sponsor and Land Bank agree that vegetation is adequately established.
 - c. Establishes a protected, project-specific contingency fund to cover additional maintenance and other costs associated with the mitigation project following final sign-off by Ecology. The sum of this contingency fund must be negotiated at the end of the first growing season after construction (approx. one year) and be adequate to cover all expenses associated with ensuring the continued success of the project (i.e., durability).
 - d. Provides compensation for Land Bank staff time and other expenses resulting from involvement with the mitigation project.

DEFINITIONS

Proposed project – The proposed construction project which, when executed, will cause wetland impacts.

Project sponsor – The public agency responsible for the proposed project.

Mitigation plan/mitigation project – The plan/project designed to compensate for wetland impacts caused by the proposed project.

Overmarsh Farm Commons: Stewarding Agricultural Land for the Greater Good



Posted August 28, 2024 - Overmarsh Farm Commons is a shared land access project of San Juan Island Grange #966. The farm commons is an exciting opportunity for San Juan Islanders to work together to cultivate food for themselves and the community on publicly owned land.

Granted a lease from the San Juan County Conservation Land Bank, the Grange recently assumed management of 35 acres of Beaverton Marsh Preserve, near Friday Harbor along Roche Harbor Road. Christened Overmarsh Farm Commons, the farm includes five acres of land that is irrigated and deer fenced, with the rest preserved for crop and livestock production.

The goal of Overmarsh Farm Commons is to cultivate a resilient and thriving agricultural community on San Juan Island, utilizing cutting-edge soil science alongside regenerative agricultural practices. The project will enhance biodiversity, strengthen food security, and bolster community resilience in response to the climate crisis. The Grange sees the farm commons as an embodiment of our shared natural resources and values. The land is precious, irreplaceable, and worthy of stewardship.

Overmarsh Farm Commons was selected by the San Juan Island Community Foundation as one of 30 projects featured as part of its fundraising campaign at the San Juan County Fair this year. The campaign raised all funds needed for a greenhouse for the Overmarsh Farm Commons Community

Garden. San Juan Island Grange extends its heartfelt gratitude to the community and the Community Foundation for their generous support.

Looking ahead to the 2025 growing season, the Grange is offering a range of parcel sizes to gardeners and farmers interested in working the land at Overmarsh Farm Commons:

- Community garden patches: 100–200 square feet
- Allotments: 1,000–2,000 square feet
- Commercial plots: up to half an acre
- Collaborative farms: up to one acre
- Custom arrangements are available—just ask!

For more information, please visit the Grange website at <https://sanjuangrange.org/overmarsh-farm-commons.html> (<https://sanjuangrange.org/overmarsh-farm-commons.html>) or contact Amanda Zee at amanda@sjiguild.com.

San Juan Island Grange #966 is a grassroots, non-partisan advocacy group dedicated to building a resilient community on San Juan Island. Grange programs and policies are consistent with federal and state laws on nondiscrimination regarding race, color, gender, national origin, religion, age, disability, and sexual orientation.

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Steve Snowden: The Conservation Land Bank deserves our support

I support the San Juan County Conservation Land Bank (CLB) renewal effort because it is a vital part of maintaining scenic, environmental, and recreational attributes of the San Juan Islands that both residents and visitors cherish. Among many other activities, we can walk along the beaches of the Fisherman Bay Spit and soon the North Shore Preserve, enjoy the majestic vistas from Mt. Grant and Turtleback Mountain as well as the views over Beaverton Marsh and Zylstra Lake, explore the forest of Lopez Hill, and whale watch from Deadman Bay Preserve.

In a very real sense, we are all co-owners of CLB preserves. We can visit most of them anytime we wish during daylight hours, we can participate in their organization and oversight, we can volunteer to help maintain existing trails and build new ones, and for those of us who purchased property here since the CLB was created in 1990, we have contributed to the purchase of these properties through the one-time 1% Real Estate Excise Tax (REET).

The benefits of the CLB come at very little cost to county residents beyond the REET. While properties are removed from the tax rolls, many of the parcels were under current use designations, most often Designated Forest Land which reduces property taxes to pennies on the dollar. For instance, the previous owners of Turtleback Mountain paid less than \$1,000 per year in property tax. Moving the CLB properties off the tax rolls increases the tax burden for the remaining privately held parcels by only \$2.00 per \$100,000 of valuation, \$15 for a \$750,000 parcel.

For those who support affordable housing, know that Washington State Statutes mandate that the 0.5% affordable housing REET requires the continuation of the CLB REET. The CLB is good for San Juan County and deserves to be renewed!

Steve Snowden

Lopez Island

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