202103120152
03/12/2021 01:21 PM Pages: 1 of 81 Fees: $183.50
Skagit County Auditor

After filing return to:

TOWN OF HAMILTON
PO Box 528
Hamilton, WA 98255

HAMILTON TOWN COUNCIL

Hamilton, Washington

RESOLUTION NO. 21-02

APPROVAL OF AN AMENDMENT TO THE PROPERTY DEVELOPMENT AGREEMENT WITH FORTERRA HAMILTON LLC., AND AUTHORIZATION FOR THE MAYOR TO SIGN THE AMENDED AGREEMENT

WHEREAS, the Town of Hamilton annexed the property known as assessor's parcel number 41064 and 41077, consisting of 42 acres of land located at 34753 Walders Road; and

WHEREAS, on September 23, 2019, the Skagit County Boundary Review Board approved a proposed annexation of 42 acres located at 34753 Walders Road under file number 2019-01 after a 45 day public comment period; and

WHEREAS, on October 8, 2019, the Town of Hamilton Town Council approved and accepted the annexation of 42 acres located at 34753 Walders Road by Ordinance 344; and

WHEREAS, on October 14, 2019 Forterra, the property owner of 34753 Walders Road, submitted requested materials to complete an application requesting approval of a Development Agreement for the property per HMC 10.68.160(D)(1) and HMC 10.68.180; and

WHEREAS, on October 17, 2019 the town issued a Notice of Application and public State Environmental Policy Act (SEPA) Mitigated Determination of Non-Significance pursuant to the noticing requirements of Hamilton Municipal Code (HMC) 10.68.080; and

WHEREAS, the Notice of Application and SEPA MDNS was mailed to individual property owners within 600 feet of the property, published in the Skagit Valley Herald, and posted to the property; and

WHEREAS, on October 28, 2019 the town issued a Notice of Public Hearing pursuant to the noticing requirements of HMC 10.68.090; and

WHEREAS, the Notice of Public Hearing was mailed to individual property owners within 600 feet of the property, published in the Skagit Valley Herald, and posted to the property; and

WHEREAS, following the public hearing, the Hamilton Town Council deliberated on approving and adopting the Development Agreement; and

WHEREAS, the Hamilton Town Council approved the Development Agreement and authorized the mayor to enter into and sign the Development Agreement with Hamilton Forterra, LLC. as per HMC 10.68.180 on December 10, 2019; and

WHEREAS, the property was designated Business Commercial under the Hamilton Future Land Use and Zoning maps on January 14, 2020; and

WHEREAS, several minor development regulation discrepancies were discovered during the early design process that cannot be resolved under the vested Town of Hamilton Zoning Code without amending the Development Agreement; and

WHEREAS, additional roadway safety and parking standard details were amended to the Development Agreement to further the sustainable development intent and design of the project; and

WHEREAS, Forterra Hamilton LLC has also submitted a Tentative Site Plan to the Town of Hamilton as an additional Exhibit under the Amended Development Agreement; and

WHEREAS, the Hamilton Town Council approves the amendments to the Development Agreement and authorizes the mayor to enter into and sign the Development Agreement with Hamilton Forterra, LLC. as per HMC 10.68.180.

NOW, THEREFORE, THE TOWN COUNCIL RESOLVES AS FOLLOWS:

Section 1. The Town Council makes the following findings:

A. The Town Council adopts and incorporates the foregoing recitals as findings as if set forth in full herein.

B. This is a proposal to amend the existing Development Agreement between Forterra Hamilton and the Town of Hamilton, for the property located at 34753 Walders Road, Skagit County Assessor Parcels 41064 and 41077.

C. In order to provide additional individual ownership opportunities and build more affordable housing, the proposed amendment to the Development Agreement will increase the availability of different housing types and affordable housing. Amendments to the Development Agreement include changes in Lot Area Standards, specifically the intent to include zero interior lot line allowances for attached single family residence and townhome

subdivision and development. It also will allow a minor 18 inch projection setback exception for appurtenant structures such as porches, eaves and bay windows.

Under the current Residential standards of the B-C zone, duplexes and attached single family residences, are allowed, as are apartments. However, there are no development standards written for these types of structures to be built on subdivided lots. The zero interior lot line amendments are minor deviations to HMC 10.33.070(4), and allow the owner to subdivide the property, while maintaining medium densities and providing affordable home ownership and rentals.

D. Additional language regarding parking standards has also been added to address the allowance of using on-street parking for some commercial use. The minor additions for parking, roadway safety, and lot development standards do not deviate from or increase the density of the original conceptual plan or Subarea Plan.

E. Forterra has submitted a tentative master plan to the Town as an addendum to the amended agreement. The addition of the tentative master plan further refines the concept, and gives the Town and Forterra a shared vision for development.

F. Procedural requirements.

1. SEPA requirements with respect to this non-project action have been satisfied through the completion of a SEPA checklist submitted by the applicant on October 14, 2019 and a MDNS issued on October 17, 2019.

2. SEPA is not required for approval of or amendment to Development Agreements. The Town has agreed to hold a public hearing to review the proposed amendments to the original Development Agreement and to consider approval and recommendation for the Mayor's signature.

3. Approval of the amendments to the Development Agreement is a Type 2 discretionary decision with final decision authority by the Town Council pursuant to HMC 10.68.30(C).

4. The public participation process used in the adoption of this ordinance has complied with all applicable requirements of the GMA and the HMC. The general public and various interested agencies and parties were notified of the public hearings by means of legal notices. Notification was provided in accordance with HMC 10.68.090.

G. This ordinance is consistent with the record.

1. Acceptance of and authorization for the mayor to sign the Amended Development Agreement with Hamilton Forterra LLC:

   a. Is authorized by RCW 36.70B.170;

   b. Is consistent with the Hamilton GMACP and will increase the availability of affordable housing, provide multiple types of energy efficient housing, and support economic development outside of the floodway while preserving open space and protecting critical areas. The property owner has also included low impact development as part of the Development Agreement;

c. Is consistent with the Hamilton Zoning Code per HMC 10.68.160(D)(1) and HMC 10.68.030(D).

Section 2. The Town Council makes the following conclusions:

A. The existing Development Agreement and the proposed amendments to the existing Development Agreement are consistent with the regulations in the Hamilton Municipal Code per HMC 10.68.160(D)(1) and 10.68.180.

B. The existing Development Agreement and the proposed amendments to the existing Development Amendment are consistent with the elements of the GMACP, including the 2007 Hamilton Comprehensive Subarea Plan.

C. The town has complied with all SEPA requirements with respect to this non-project action.

D. The existing Development Agreement and the proposed amendments to the existing Development Agreement do not result in an unconstitutional taking of private property for a public purpose.

Section 3. The Hamilton Town Council bases its findings and conclusions on the entire record of the Town Council, including all testimony and exhibits. Any finding, which should be deemed a conclusion, and any conclusion which should be deemed a finding, is hereby adopted as such.

Section 4. The Town of Hamilton Council accepts the terms of the Amended Development Agreement between the Town of Hamilton and Hamilton Forterra LLC as attached hereto in Exhibit A and authorizes the mayor to sign the Amended Development Agreement:

A. This development agreement is binding on the parties and their successors as per HMC 10.68.180(G). This development agreement shall be enforceable during its term by a party to the agreement and shall govern during the term of the agreement with respect to all or that part of the development specified in the agreement and, unless agreed to by all parties to the development agreement other than the Town, may not be subject to an amendment to a zoning ordinance or development standard or regulation or a new zoning ordinance or development standard or regulation adopted after the effective date of the agreement. Permits issued by the Town after the execution of the development agreement shall be consistent with the agreement or such agreed to amendment to the zoning ordinance or development standard or regulation. In all development agreements, the Town shall reserve the authority to impose new or different regulations to the extent required by serious threat to public health and safety.

Section 5. Severability. If any section, subsection, paragraph, sentence, clause or phrase of this resolution or its application to any person or situation should be held to be invalid or unconstitutional for any reason by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of the remaining portions of this resolution or its application to any other person or situation.

Section 6. Effective Date. This resolution shall take effect immediately upon passage by the Town of Hamilton Town Council.

PASSED BY THE TOWN COUNCIL OF THE TOWN OF HAMILTON, WASHINGTON at a Regular Meeting there of this 9th day of February, 2021.

TOWN OF HAMILTON

Carla R. Vandiver

Carla Vandiver, Mayor

ATTEST:

By Beth Easterday

Beth Easterday, Town Clerk

Adopted: 2/9/21 Effective:

AMENDED DEVELOPMENT AGREEMENT

This Amended Development Agreement ("Agreement" or "Amended Development Agreement") is made and entered into this 9th day of Februbary, 2021, by and between the Town of Hamilton, a Washington municipal corporation ("Town"), and Forterra Hamilton LLC, a Washington limited liability company ("Owner").

RECITALS

A. Pursuant to RCW 36.70B.170 through RCW 36.70B.210 and Section 10.68.180 of the Hamilton Municipal Code ("HMC"), the Town is authorized to enter into development agreements with persons having an ownership interest or control of real property within the Town's jurisdiction.

B. The Owner owns approximately 42 acres of land located within the Town limits, legally described on Exhibit A hereto and incorporated herein by reference (the "Property"). A survey of the Property is included as Exhibit B. The Owner has submitted an application for approval of a development agreement with respect to the Property.

C. The Property is zoned Business and Commercial pursuant to HMC Ch. 10.33 ("BC Zone").

D. All terms defined in HMC Ch. 10.06 shall have the same meaning herein as therein provided as of the date of this Agreement.

E. The Town Council adopted HMC Section 10.68.180 which authorizes development agreements as a means to document conditions and procedures for certain types of development and to thereby provide greater certainty to the Town, applicants and the public regarding how property will be developed.

F. HMC Section 10.33.070(A) provides that HMC Section 10.33.070 is applicable to certain development site that are zoned BC that have an expanded site area of 5 acres or more that include a combination of residential and non-residential uses, and in which the residential uses comprise a significant portion of the development site exclusive of the common use area.

G. The Property and the Owner's development plans, which provide for at least 250 residential units, meet the foregoing requirements of HMC Section 10.33.070(A).

H. The Town regulates critical areas pursuant to HMC Ch. 15.15 (the "Critical Areas Ordinance") which is applicable to portions of the Property pursuant to HMC Sections 10.03.060 and 10.06.123.

I. The Town's development standards and regulations are set forth in the Town's

Comprehensive Plan, the Hamilton Municipal Code including, without limitation, Title 10, the Critical Areas Ordinance, and other ordinances as set forth in HMC Section 10.03.060, the town's Subdivision Ordinance (Ordinance Number 150), State Environmental Policy Act ("SEPA") regulations and substantive SEPA policies, and such other ordinances as may be applicable to the development of the Property (collectively and as in effect on the date of this Agreement, the "Development Regulations").

J. The Property is crossed by a tributary to Careys Creek and includes wetlands (the "Wetlands").

K. The Owner has obtained a wetlands site assessment meeting the requirements of HMC Section 15.15.220 prepared by Hamer Environmental and dated July, 2019 ("Wetlands Site Assessment") which has categorized the Wetlands as a Category III wetlands under HMC Section 15.15.200, which categorization is accepted and agreed to by the Town.

L. HMC Section 10.68.180(D) allows the Town to modify development standards if an applicant can demonstrate that the modification is necessary to provide flexibility to achieve public benefits and to provide superior outcomes than those that would result from strict compliance with applicable development standards.

M. The Owner is proposing a Project that has environmental and sustainability attributes that may achieve public benefits and provide superior outcomes sufficient to justify a reduction in the required Wetlands buffers to the 110 foot buffer required for a Category III wetlands adjacent to a land use with moderate impact under HMC Section 15.15.205.

N. Based on the Wetlands Site Assessment, the increased buffer width requirements of HMC Section 15.15.205(B) are inapplicable.

O. The Town Council has determined that the implementation of the Project will be consistent with the Town's Comprehensive Plan, that the Project will result in a development that is compatible with adjacent land uses and surrounding neighborhoods and that the Project will provide great public benefits to the community.

P. A development agreement must be approved by ordinance or resolution after a public hearing.

Q. A Development Agreement, dated December 10, 2019, was entered into by the Town and Owner (the "Initial Development Agreement"), after having been approved pursuant to Town Council Resolution No. 12-2019.

R. A public hearing for the Initial Development Agreement was held on November 11, 2019 and a subsequent public hearing was held for this Amended Development Agreement on January 12th, 2021. After due consideration of the public testimony and file information, the Town Council approved this Amended Development Agreement by Hamilton Resolution No. 21-

02 on February 9th, 2021.

S. This Agreement is subject to review under RCW Ch. 36.70C.

NOW THEREFORE, in consideration of the mutual agreements contained herein, including the long-term benefit to both the parties, the receipt and sufficiency of which consideration is hereby acknowledged, the Town and the Owner hereby agree as follows:

AGREEMENT

1. Project Description. The project consists of a mixed-use development that will include residential, business, commercial and other uses permitted under the BC Zone and a common open space that will include the Wetlands and certain other areas within the Property (the "Project"). The Project shall have approximately 250 residential units. At least 35% of the residential units must meet the affordability requirements of HMC Section 10.33.070(B). A Critical Areas Report is attached as Exhibit C. Plans for the phasing of the Project, a sustainability plan for the Project, and a tentative site plan are attached hereto as Exhibits D, E and F (collectively the "Conceptual Plan"). The parties acknowledge that the Conceptual Plan is not a final site plan, phasing arrangement or sustainability plan and will be detailed and modified during the build-out of the Property in order to achieve a number of mutually desirable flexibility objectives including, but not limited to: incorporating new information, responding to changing community and market needs, and allowing for comparable benefit or functional equivalence with no significant reduction of public benefits or environmental protection. Changes to the Conceptual Plan do not require the approval of the Town so long as such changes do not reduce the obligations of the Owner under this Agreement.

2. Wetlands. In accordance with HMC Section 15.15.205 and based on the proposed uses within the Project, a 150-foot buffer is now required for the Wetlands (the "Wetlands Buffer"). Based on the Wetlands Site Assessment, the Town has concluded that no increase in the Wetlands Buffer is required under HMC Section 15.15.205(B). In addition to any rights the Owner may have as to decreasing the Wetlands Buffer width under HMC Section 15.15.205(C), the Owner may propose a reduction in the 150 foot Wetlands Buffer otherwise required for the Wetlands, but not to less than 110 feet, if it is able to demonstrate, to the satisfaction of the Planning Director, that the reduction will enable the Project to include additional environmental and sustainability attributes that may achieve public benefits and provide superior outcomes sufficient to justify the reduction. The Owner may propose to locate one or more stormwater detention vaults within the Wetlands Buffer if the Owner can demonstrate to the satisfaction of the Planning Director that doing so will enable the Project to achieve greater hydrological, water quality or aquatic area habitat functions.

3. Parking. In order to provide flexibility to the Owner in order to achieve public benefits and provide superior outcomes than those that would result from strict compliance with applicable development standards and conditions:

(i) notwithstanding HMC Section 10.33.070(H), as to studio and one-bedroom

residential units, the minimum number of off-street parking spaces shall be 1.0;

(ii) notwithstanding HMC Section 10.54.060, required off -street parking spaces may have a pervious surface, but not gravel; and

(iii) as between the parking requirements of HMC Section 10.33.070(H) and the parking location requirements of HMC Section 10.54.070 or other conflicting provisions of HMC Chapter 10.54, the provisions of HMC Section 10.33.070 shall take precedence. Owner will seek off street parking reductions under 10.33.070(H) by up to the 50% allowance for non-residential off-street parking requirements specified in Section 10.54.020 within the commercial area of the development if an analysis demonstrates the suitability of the reduction. Development designs will consider on-street parking not required for residential uses to apply towards off-street parking requirements for non-residential uses as per HMC 10.33.070(H).

4. Subdivisions. The Owner intends to apply to the Town for one or more long subdivisions of all or part of the Property. For purposes of its review of such application(s) and in order to provide the Owner with the flexibility necessary to achieve public benefits and provide superior outcomes than those that would result from strict compliance with applicable development standards and conditions, the Town agrees and acknowledges that:

(i) subdividing the Property would be compatible with the objectives and goals of the Town's Comprehensive Plan and Development Regulations;

(ii) based on the current vegetation on the Property, no Timber Management Plan will be required;

(iii) based on the location of the Property relative to other areas of the Town, no traffic study will be required beyond what may be required by SEPA;

(iv) information provided by the Owner as required by SEPA shall be sufficient for purposes of any required environmental impact assessment information;

(v) so long as the Project does not include any septic systems, no soil analysis will be required;

(vi) Owner will work with the Town to design access and safety improvements to Walders Road, including but not limited to, rerouting, widening, adjusting ingress/egress access points, considering traffic safety designs such as roundabouts, on street parking, and landscaping, sidewalk or curb bump outs. Owner will seek creative partnership opportunities with the Town, including grants, State and Federal funding for improvements to Walders Road; and

(vii) the bond or other surety required for road improvements can be furnished

by Project phases such that the amount of the surety is not more than the cost of the road improvements for the phase of the Project then under development

5. Lot Area Standards. In order to achieve medium residential densities, as the B-C Zone intends, while retaining street standards, open space opportunities and walkability connections, the subdivision of lots may need to deviate from the standards required in HMC:

(i) Minimum Lot Area; Public Sewer- HMC 10.33.050 provides that no minimum lot area is required in the B-C Zone when public sewer is available. So long as the Owner installs a sanitary sewer system that meets all applicable governmental requirements (such as, by way of example only, a Sedron Varcor system) and treats all of the black water and gray water discharges generated on the Property so as to avoid the need for septic systems, the Property will be considered to have a public sewer for purposes of HMC 10.33.050 and the other Development Regulations and, accordingly, there shall be no minimum lot area notwithstanding any references to lot size in the Conceptual Plan; and

(ii) Development Standards - The minimum setbacks required by HMC Section 10.33.070(D)(4) shall apply except that: (a) eaves, porches, bay windows and other appurtenances may extend up to 18" into the setbacks; and (b) minimum side, interior setbacks for attached buildings such as duplexes and row houses shall be zero feet.

6. Landscaping. With reference to the requirements of HMC Ch. 10.50 and in order to provide the Owner with the flexibility necessary to achieve public benefits and provide superior outcomes than those that would result from strict compliance with applicable development standards and conditions, the Town agrees and acknowledges that:

(i) landscaping requirements shall be determined and applied separately for each phase of the Project and Section 10.50.050(C) shall be inapplicable to the Project;

(ii) A sufficient landscaping border along Hamilton Cemetery Road will be required to be installed prior to construction of any phase of the development visible from Hamilton Cemetery Road. All other landscaping and screening will not be required to be installed prior to occupancy of a phase of the Project and any cash deposit or other assurance required by HMC Section 10.50.040(J) shall be limited to the estimated installation costs of landscaping improvements along public rights-of-way;

(iii) based on THE Owner complying with the common open space and

community green requirements of HMC Section 10.33.070, the provisions of HMC Section 10.50.050 shall be inapplicable to the Project; and

(iv) as between the setbacks required under HMC Section 10.33.070(D) and the street frontage requirements of HMC Section 10.50.060 or other conflicting provisions of HMC Chapter 10.50, the provisions of HMC Section 10.33.070 shall take precedence.

7. Vested Rights. Except as expressly modified by this Agreement, the Project shall vest to the Development Regulations subject to the following:

7.1 Public Health and Safety. Pursuant to RCW 36.70B.170(4) and HMC Section 10.68.180(G), the Town reserves the authority to impose new or different regulations to the extent required by serious threat to public health and safety.

7.2 Future Changes Agreed to by the Owner. Pursuant to HMC Section 10.68.180(G), the Owner may elect, subject to the approval of the Planning Director, that changes to the Development Regulations that become effective after the date of this Agreement may be applied to the Property. Such election shall be made and approved in writing and retained in the Town records for the Property.

7.3 Building Code. Requirements of the International Building Code, or any other similar uniform code as may be approved by the State Building Code Council and adopted by the Town, shall apply to development of the Property including, but not limited to, electrical, mechanical, fire, plumbing, maintenance, residential, earthquake, and other similar uniform construction codes in effect on the date that a complete application for the particular construction or building permit is submitted to the Town.

7.4 SEPA. Any changes made to SEPA by the State and to the regulations promulgated by the State thereunder shall apply to the Project to the same extent as if this Development Agreement had not been entered into it being understood that the Owner is still required to comply with SEPA with respect to the development of the Project.

8. Fees and Permits. The following shall apply to the Project.

8.1 Required Permits and Approvals. The future development of the Property and the development of the Project is subject to the Owner applying for and obtaining all permits and approvals that are required by the Development Regulations. The requirements for such applications and the process for obtaining such permits and approvals shall be as provided in the Development Regulations.

8.2 Permit Fees and Impact Fees. Land use and other permit fees adopted by the Town as of the date of this Agreement may be increased by the Town from time to

time, and such increases shall be applicable to permits and approvals for the Project and the Property as long as such fees apply to similar applications and projects in the Town. Notwithstanding the foregoing, during the Term of this Agreement, the Town may not impose new school, traffic, parks or other impact fees or increase existing impact fees applicable to the Project or the Property.

8.3 Planning Director. If requested by the Town, the Owner shall pay the reasonable cost of engaging a qualified independent contractor (either an individual or a company) to undertake the review of the Owner's applications for Project permits and approvals and, in that capacity, to perform the responsibilities of the Planning Director under the Development Regulations. Amounts paid by the Owner under this Section shall be credited against the land use and other permit fees otherwise due from the Owner.

9. General Provisions. The following shall apply to this Agreement:

9.1 Term. The term of this Agreement is twenty (20) years from the date of execution by both parties of the Initial Development Agreement (the "Term"). This Agreement shall continue in full force and effecting during the Term.

9.2 Recording of Agreement. Pursuant to RCW 36.70B.190, the Owner shall record this Agreement with the Skagit County Recorder's Office at the Owner's sole cost.

9.3 Indemnification. Except as otherwise specifically provided elsewhere in this Agreement and any exhibits hereto, each party shall protect, defend, indemnify and hold harmless the other party and their officers, agents, and employees, or any of them, from and against any and all claims, actions, suits liability, loss, costs, expenses, and damages of any nature whatsoever, which are caused by or result from any negligent act or omission of the party's own officers, agents, and employees in performing services pursuant to this Agreement. In the event that any suit based upon such a claim, action, loss, or damage is brought against a party, the party whose negligent action or omissions gave rise to the claim shall defend the other party at the indemnifying party's sole cost and expense; and if final judgment be rendered against the other party and its officers, agents, and employees or jointly the parties and their respective officers, agents, and employees, the parties whose actions or omissions gave rise to the claim shall satisfy the same; provided that, in the event of concurrent negligence, each party shall indemnify and hold the other parties harmless only to the extent of that party's negligence. The indemnification to the Town hereunder shall be for the benefit of the Town as an entity, and not for members of the general public. In the event any legal action or special proceeding is commenced by any person or entity other than a party to challenge this Agreement or any provision herein, the Town may elect to tender the defense of such lawsuit or individual claims in the lawsuit to the Owner.

9.4 Governing Law. This Agreement shall be governed by and interpreted in accordance with the laws of the State of Washington.

9.5 Agreement Binding on Successors. The Agreement shall be a covenant running with the land and shall inure to the benefit of and be finding upon the Owner and the Town, and their heirs, successors and assigns. The Owner may sell all or part of the Property or assign its right and obligations under this Agreement without the consent of the Town. The Owner shall promptly notify the Town of any such sale or assignment.

9.6 Severability. If any provisions of this Agreement are determined to be unenforceable or invalid in a final decree or judgment by a court of law, then the remainder of this Agreement not decreed or adjudged unenforceable or invalid shall remain unaffected and in full force and effect. In that event, this Agreement shall thereafter be modified to implement the intent of the parties to the maximum extent allowable under law. The parties shall diligently seek to agree to modify the Agreement consistent with the final court determination, and no party shall undertake any actions inconsistent with the intent of this Agreement until the modification to this Agreement has been completed.

9.7 Authority. Each party respectively represents and warrants that it has the power and authority, and is duly authorized, to enter into this Agreement on the terms and conditions herein stated, and to deliver and perform its obligations under this Agreement.

9.8 Amendment. This Agreement shall not be modified or amended without the express written approval of the Town and the Owner.

9.9 Recitals and Exhibits. The Recitals and Exhibits are incorporated herein by this reference as if fully set forth.

9.10 Headings. The headings in this Agreement are inserted for reference only and shall not be construed to expand, limit or otherwise modify the terms and conditions of this Agreement.

9.11 Time of the Essence. Time is of the essence of this Agreement and of every provision hereof. Unless otherwise set forth in this Agreement, the reference to "days" shall mean calendar days. If any time for action occurs on a weekend or legal holiday in the State of Washington, then the time period shall be extended automatically to the next business day.

9.12 Entire Agreement. This Agreement represents the entire agreement of the parties with respect to the subject matter hereof. There are no other agreements, oral or written, except as expressly set forth herein.

9.13 Remedies, Specific Performance, Attorney's Fees. The parties may, in addition to any other rights or remedies, take action to cure, correct, or remedy any default; enforce any covenant or agreement herein; enjoin any threatened or attempted violation thereof; enforce by specific performance the obligations and 1ights of the parties hereto; or obtain any remedies consistent with the foregoing and the purposes of this Agreement. The parties specifically agree that damages are not an adequate remedy for breach of this Agreement, and that the parties are entitled to compel specific performance of all material terms of this Agreement by any party in default hereof. In the event any litigation or dispute resolution process is instituted to interpret or enforce any provision of this Agreement or with respect to any dispute relating to this Agreement, the prevailing party shall be entitled to recover from the losing party its reasonable attorneys' fees, expert fees, litigation expenses, and associated costs, including those incurred at trial and on appeal.

9.14 Relationship of the Parties; No Third-Party Beneficiary. This Agreement shall not be construed or interpreted to create a partnership or joint venture between the parties. This Agreement shall not be construed to make the Town or the Owner liable for any debts or obligations of the other. This Agreement is made and entered into for the sole protection and benefit of the parties hereto and their successors and assigns. No other person shall have any right of action based upon any provision of this Agreement.

9.15 Interpretation. This Agreement has been reviewed and revised by legal counsel for both parties, and no presumption or rule concerning ambiguity against the drafter of the document shall apply to the interpretation or enforcement of this Agreement. Nothing herein shall be construed or implied that the Town is waiving or contracting away its constitutional and statutory powers, except as otherwise authorized by law.

9.16 Notice. All communications, notices, and demands of any kind that a party under this Agreement requires or desires to give to any other party shall be in writing and either (i) delivered personally, (ii) sent by email so long as receipt is confirmed, or (iii) deposited in the U.S. mail, certified mail postage prepaid, return receipt requested, and addressed as follows:

If to the Town: Town of Hamilton
584 Maple Street
Hamilton, WA 98255
Attn: Mayor

If to the Owner: Forterra Hamilton LLC
PO Box 4189

Seattle, WA 98194
Attn: Rebecca Bouchey
rbouchey@forterra.org

with a copy to: Corporate Counsel
Forterra NW
PO Box 4189
Seattle, WA 98194
legal@forterra.org

Notice by hand delivery shall be effective upon receipt. Notice by email shall be effective upon confirmation of receipt. If deposited in the mail, notice shall be deemed delivered forty-eight (48) hours after deposited. Any party at any time by notice to the other party may designate a different address or person to which such notice or communication shall be given.

9.17 Delays. If either party is delayed in the performance of its obligations under this Agreement due to Force Majeure, then performance of those obligations shall be excused for the period of delay.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

TOWN OF HAMILTON

By_____
Its Mayor

Attest: _____

FORTERRA HAMILTON LLC.

By_____
Its President

STATE OF WASHINGTON)
) ss
COUNTY OF SKAGIT)

On this 11th day of February 2021, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared CARLA VANDIVER, to me known to be the Mayor of the TOWN OF HAMILTON, the Washington municipal corporation that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation for the uses and purposes therein mentioned, and on oath stated that he/she is authorized to execute the said instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

Elizabeth Easterday
Notary Public in and for said state, residing
at 554 Maple St, Hamilton
My commission expires: 6/7/23
Print Name: Elizabeth Easterday

Notary Public
State of Washington
Elizabeth Easterday
Commission No. 20102040
Commission Expires 06-07-23

STATE OF WASHINGTON)
) ss
COUNTY OF KING)

On this 24th day of February 2021, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Michelle Connor, to me known to be the President + CEO of FORTERRA NW, the Manager of FORTERRA HAMILTON LLC, the Washington limited liability company that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation for the uses and purposes therein mentioned, and on oath stated that he/she is authorized to execute the 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 said state, residing
at 5723 NE 1st pl
My commission expires: 10/14/24
Print Name: Aaron Anderson

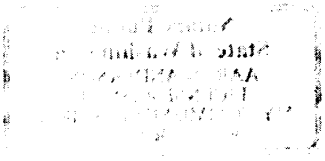
Notary Public
State of Washington
AARON ANDERSON
LICENSE # 188531
MY COMMISSION EXPIRES
OCTOBER 14, 2024

EXHIBIT A
Legal Description of The Property

Skagit County Parcels P41064 and P41077.

Parcel 41064: CU F&A #33 AF#896320 1980 THE EAST 20 RODS OF THE SW1/4 SE1/4 LESS HIGHWAY

Parcel 41077: CU F&A #33 AF#896320 1980: SE1/4 SE1/4 LESS HWY



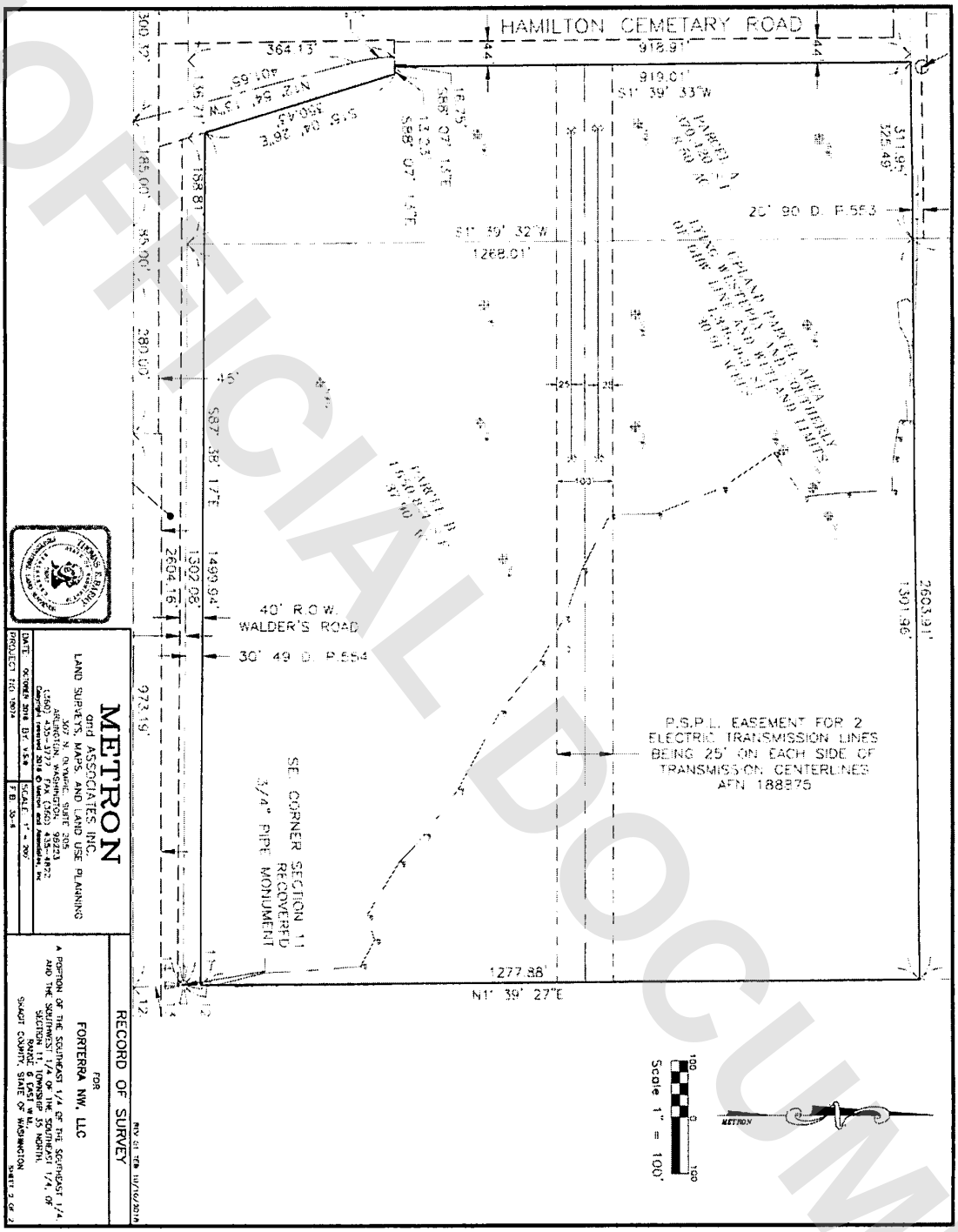


EXHIBIT C
Critical Areas Report, Hamer Environmental, July 2019

CRITICAL AREAS REPORT

34753 Walders Road (Parcel #'s: P41064 & P41077)

Hamilton, WA

Prepared by
Hamer Environmental
For Forterra

July 2019

CRITICAL AREAS REPORT

34753 Walders Road (Parcel #'s: P41064 & P41077)

July 2019

Prepared By: Kristin Murray, Wetland and Fisheries Biologist, M.Sc., PWS
360-899-5156

Other Contributors and Roles:

Adam Crispin, M.Sc. Candidate, Fisheries and Wetland Scientist
Trina Miller, Wetland Biologist

Table of Contents

Figures

Tables

Appendices

Acronyms and Abbreviations

BPJ	best professional judgment
CAO	critical areas ordinance
DNR	Washington Department of Natural Resources
WDOE	Washington State Department of Ecology
FGDC	Federal Geographic Data Committee (formerly Cowardin)
HGM	Hydrogeomorphic (Classification System)
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	Ordinary high-water mark
PFO	palustrine forested
PSS	palustrine scrub-shrub
PEM	palustrine emergent
RM	river mile
TMDL	total maximum daily load
T&E	Threatened and Endangered Species
UGA	Urban Growth Area
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Access Code
WDFW	Washington State Department of Fish and Wildlife
WRIA	Water Resource Inventory Area

Chapter 1. Introduction

This Critical Areas Report has been prepared to meet requirements for wetland determinations according to U.S. Army Corps of Engineers guidelines (USACE 2010) and describe how the project addresses the Town of Hamilton requirements for wetlands and streams in their Critical Areas Ordinance. The report contains descriptions of project area natural resources, including wetlands and streams, wildlife species and habitats, and Threatened and Endangered (T&E) species. One, Wetland 1, and the ordinary high-water mark (OHWM) of a tributary to Careys Creek were delineated on the project property.

Information gathered in this report assists the project applicant in avoiding and/or minimizing impacts to sensitive areas and species; provides information for regulatory reviewers; and provides information for mitigation/restoration reports if needed. The report may support review by the Town of Hamilton, U.S. Army Corps of Engineers (USACE), the Washington State Department of Ecology (WDOE), and/or the Washington State Department of Fish and Wildlife (WDFW).

Chapter 2. Proposed Project

2.1 Location

This project property is located at 34753 Walders Rd (Parcel #s P41064 & P41077) in the urban growth boundary (UGA) of the town of Hamilton, Washington. The site is bounded by rural residences and agricultural/forestry land to the north, Walders Road to the south, agricultural/forestry land (tree farm) to the east, and Hamilton Cemetery Road along the west side. A tributary to Careys Creek runs along the east side of the property. This approximately 43-acre site is located within portions of Township 35 North, Range 06 East, Section 11 (Figure 1).

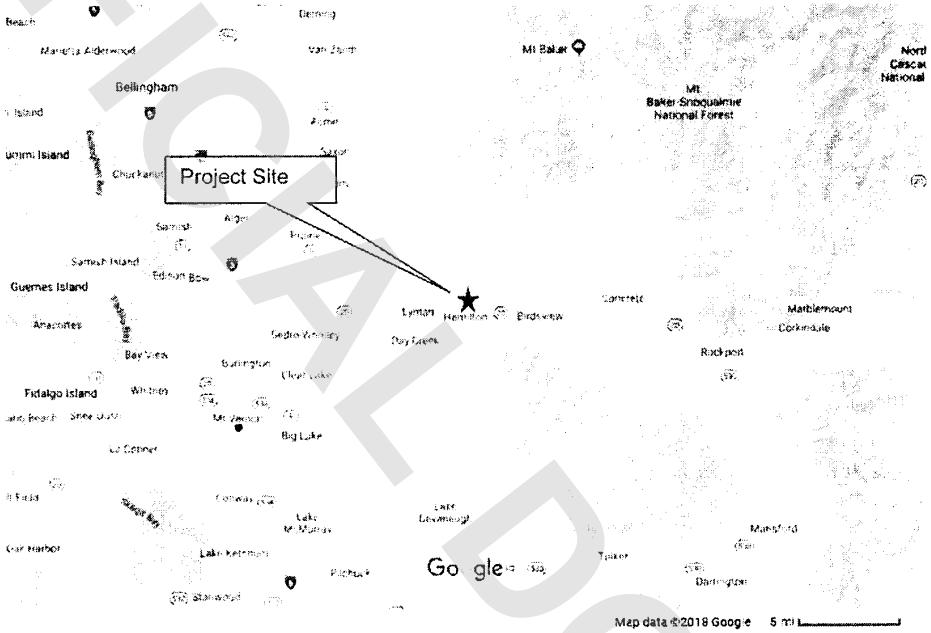


Figure 1. Project Vicinity Map

2.2 Purpose and Description

The purpose of this document is to satisfy Town of Hamilton critical area regulations that require delineation of critical areas such as wetlands, riparian corridors, and fish and wildlife habitats (such as streams) according to HMC 15.15.020 (Town of Hamilton 2016).

Forterra is a Non-profit organization that works with communities to secure lands that are Keystones of the community. Forterra has been asked by the town of Hamilton for help in investigating the feasibility of the 43-acre site (P41064 & P41077), which has been designated as Hamilton's Urban Growth Area, for development as a subdivision that could include up to 300

residential units (SF and MF) and some retail. The intention is that this development would be net zero waste and water, and energy neutral. Forterra is working with HDR to develop a masterplan for infrastructure of the development. Forterra has signed a Purchase and Sale Agreement with the owner of the parcels and is conducting due diligence testing.

Chapter 3. Methods

3.1 Wetland and Stream Identification, Delineation, and Classification

Hamer Environmental biologists delineated wetland and stream according to local, state, and federal guidelines on the project site (Appendix A). In addition, any sensitive areas within 200-feet of the subject property were reviewed from the property boundary, aerially, and/or from wetland databases (NWI maps). Wetland and stream boundaries on the project site were professionally surveyed. Wetland size for portions of the wetland extending off the property was estimated using aerial photos.

Wetland resources were delineated using guidelines and methods described in the *U.S. Army Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) as amended with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE 2010).

Biologists used several tools to identify and classify plants and soils examined within the investigated area. Plant indicator status and scientific plant names were identified using the *National Wetland Plant List: 2016 Update of Wetland Ratings* (Lichvar et al. 2016). Soil characteristics were recorded and classified using the *Field Book for Describing and Sampling Soils* (USDA, NRCS 2012). Hydric soil conditions were assessed using *Field Indicators of Hydric Soils in the United States, Version 8.2* (USDA, NRCS 2018).

Wetlands were classified according to federal, state, and local systems. The *Classification of Wetlands and Deepwater Habitats of the United States* [Federal Geographic Data Committee (FGDC) 2013, Cowardin] is a descriptive classification, based on physical attributes (i.e., plant community, soils, and water regime). Wetlands perform a variety of biological, physical (hydrologic), and chemical (water quality) functions. Functions and values for wetlands within the project vicinity were classified under HGM (Brinson 1993) and evaluated using the Washington State Wetland Rating System for Western Washington (Hruby 2014). Ecology divides wetlands into four hierarchical categories based on specific attributes such as rarity, sensitivity to disturbance, and functions. The Ecology classification hierarchy ranges from Category I wetlands, which exhibit outstanding features (rare wetland type, relatively undisturbed or a high sensitivity to disturbance, and high level of functions) to Category IV wetlands, which have the lowest levels of function and are often heavily disturbed (Hruby 2014).

The Town of Hamilton regulates wetlands and streams according to their critical areas ordinance [(CAO) (Town of Hamilton 2016)]. Wetlands were identified and classified ((HMC 15.15.200), and buffers assigned according to the Hamilton CAO. Hamilton classifies wetlands according to the most current Ecology rating system (Hruby 2014) and provides standard buffer widths based on wetland category and intensity of land use with buffers ranging from 25 feet to 300 feet (HMC 15.15.205-1).

Portions of the ordinary high-water mark (OHWM) of a tributary to Careys Creek along the eastern side of the site were delineated and classified according to local and state regulations and buffers assigned according to local code. Washington State Administrative Code (WAC) designates four water types in the Forest Practices Rules administered by the Washington State Department of Natural Resources (WDNR): Type S (interim Type 1) waters are designated shorelines of the state, Type F (interim Type 2 with >20 foot bankfull width and Type 3 <20 foot bankfull width) waters provide fish habitat, Type Np (interim Type 4) waters are perennial non-fish bearing streams, and Type Ns (interim Type 5) waters are seasonal non-fish bearing streams (WAC 222-16-030). Hamilton protects Fish and Wildlife Habitat Conservation Areas

(FWHCAs), which include streams as defined by the Washington Administrative Code (WAC 222-16-030, WAC 222-16-031). Hamilton requires Type F/Type 3 streams to have a 100-foot riparian buffer.

In general, biologists evaluated in-stream habitat and riparian habitat. The in-stream habitat evaluation included a qualitative analysis of the channel width, substrate, pool/riffle characteristics, stream gradient, and presence of large woody debris (LWD).

Also, the condition of buffers was qualitatively assessed using the following criteria:

- Dominant buffer vegetation type (tree, shrub, herb, vine, un-vegetated).
- Type and estimated percent cover of invasive species.
- Dominant land use (e.g., agriculture, residential, commercial, industrial)

3.2 Wetlands and Waters of the State Definitions and Regulatory Requirements

Waters of the United States: "All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; All interstate waters including interstate wetlands; All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce...Wetlands adjacent to waters (other than waters that are themselves wetlands) identified above." (Definition taken from 33 CFR, Part 328.3). "Adjacent" is defined as bordering, contiguous, or neighboring.

Wetlands: "Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." (Definition taken from 33 CFR, Part 328.3).

Limits of jurisdiction in nontidal waters:

- in the absence of adjacent wetlands, the jurisdiction extends to the ordinary high-water mark;
- when adjacent wetlands are present, the jurisdiction extends beyond the ordinary high-water mark to the limit of the adjacent wetlands;
- when the Water of the United States consists only of wetlands, the jurisdiction extends to the limit of the wetland (taken from 33 CFR, Part 328.3).

Regulatory Requirements:

Wetlands/waters of the state are under the jurisdiction of the Army Corps of Engineers (Corps), state, and local agencies. The Corps has the authority to determine whether a wetland or stream is a water of the U.S. and thus federally regulated under Section 404 of the Clean Water Act (CWA).

This site falls under local jurisdiction of the Town of Hamilton. Hamilton Code regulates land use and/or development activities within areas that meet the definitions and criteria for critical areas (including wetlands, streams, and buffers) regulation (HMC 15.15.020).

Chapter 4. Existing Conditions

4.1 Landscape Setting

Within the project vicinity land use is primarily agricultural/forestry and rural residential; however, more intense residential development exists immediately east of the site. The site lies within the Urban Growth Area (UGA) of the town of Hamilton for potential residential development with annexation into the town expected by fall of 2019. Intensive land management activities such as forestry and agriculture use began in the late 1800's.

4.1.1 Watershed Description

The project is located within the lower Skagit River watershed (WRIA 03), specifically within the Careys Creek basin (WRIA 03-0354) (WDF 1975). Careys Creek is a tributary to the lower Skagit River entering near river mile (RM) 39. Careys Creek is potentially habitat for Chinook, Coho, Pink, and Chum Salmon, Steelhead Trout, as well as Cutthroat Trout. The tributary to Carey Creek through the project area is documented habitat for Coho Salmon and Cutthroat Trout (WDFW 2018a, 2018b; WDF 1975). Habitat in the lower Skagit River has been impacted by extensive diking, draining, and filling for agricultural use according to the limiting factors analysis. Floodplain conditions are rated "poor" due to extensive modifications (diking, draining, ditching of sloughs and wetlands) with a loss of up to 45% of side channels. Sedimentation was high from agricultural activities and ditching. Riparian conditions are considered "poor" in the lower Skagit River with 72-76% of riparian areas considered impaired or moderately impaired. Water quantity is considered "poor" in the lower Skagit River with multiple 303(d) listings downstream for pH and PCBs; however, no 303(d) listings are on Carey Creek or within 1 mile downstream of the site (WSCC 2002; WDOE 2016). Removing hydromodifications and dikes; restoring side channel habitat, riverine wetlands, and riparian areas; improving LWD transport around dams; removing roads; and addressing water quality from issues from agriculture, urban and forestry use were recommended for salmonid habitat restoration (WSCC 2002).

4.1.2 Vegetation

The entire project lies within the western hemlock vegetation zone of western Washington which is dominated by three forest species: Douglas fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), and western red cedar (*Thuja plicata*) (Franklin and Dyrness 1988). A large portion of the project area is maintained (mowed) pasture grasses dominated by tall Orchard grass (*Dactylis glomerata*), bentgrasses (*Agrostis* spp.), tall fescue (*Festuca arundinacea*), and timothy (*Phleum pretense*). The southeast corner of the project area is dominated by mixed forest of red alder (*Alnus rubra*), big-leaf maple (*Acer macrophyllum*), western red cedar, and cascara (*Rhamnus purshiana*) with an understory of oso-berry (*Oemleria cerasiformis*), salmonberry (*Rubus spectabilis*), snowberry (*Symphoriocarpos albus*), red elderberry (*Sambucus racemosa*), western swordfern (*Polystichum munitum*), stinging nettle (*Urtica dioica*), pig-a-back plant (*Tolmiea menziesii*), and California blackberry (*Rubus ursinus*). Himalayan blackberry (*Rubus armeniacus*) and cut-leaf blackberry (*R. laciniatus*) are dominant along the edges of the wetland and forest in the shrub layer. The DNR Natural Heritage Information System has no records of rare plants, high quality wetlands, or ecosystems in the project vicinity (WDNR 2018).

4.1.3 Climate and Precipitation

The study area is situated approximately 27 miles inland from Puget Sound. A cool marine

climate produced by the Puget Sound results in cool, dry summers and wet, mild winters. Average annual precipitation at the nearest weather station in Sedro-Woolley, Washington is 46.28 inches (NRCS 2018). Field work was conducted on September 6, 2018. Precipitation conditions were considered low in the three months and ten days prior to field work (Appendix B-1; NRCS 2018).

4.1.4 Soils

The local soil survey identifies four mapped soil types in the project area: Giles silt loam (**59**), Gilligan silt loam (**61**), Indianola loamy sand, 0-5% slopes (**75**), Wickersham silt loam, 0-8% slopes (**157**), Table 1; Figure 2; USDA, NRCS 2018).

Table 1. Mapped soil summary

Soil Symbol	Mapping Unit and Slope	Hydric?	General Soil Characteristics	Landform Position and Features
59	Giles silt loam. Composed of 100% Giles and similar soils.	Giles-No.	Well drained; water table at more than 80 inches	Landform: Outwash terraces. Parent material: Glacial outwash and volcanic ash
61	Gilligan silt loam. Composed of 100% Gilligan and similar soils.	Gilligan-No.	Well drained; water table at more than 80 inches	Landform: Outwash terraces. Parent material: Alluvium and Glacial outwash
75	Indianola loamy sand, 0-5% slopes. Composed of 85% Indianola with 15% minor components. Minor components include Alderwood, Everett, Norma soils.	Indianola-No. Alderwood-No. Everett-No. Norma-Yes.	Somewhat excessively drained; water table at more than 80 inches	Landform: Eskers, kames, terraces. Parent material: Sandy glacial outwash.
157	Wickersham silt loam, 0-8% slopes. Composed of 90% Wickersham with 10% minor components. Minor components include Samish, undrained and Mukilteo soils.	Wickersham-No. Samish, undrained-Yes. Mukilteo-Yes.	Well drained; water table at more than 80 inches	Landform: Alluvial fans, terraces. Parent material: Alluvium derived from phyllite.

4.2 Wetland

One riverine wetland is identified on the National Wetlands Inventory (NWI) map in the project area (Figure 3; USFWS 1996). One large depressional wetland, Wetland 1, was delineated in the project area (Appendix A). Wetland 1 extends off-site north and south and is associated with a tributary to Careys Creek. The delineated wetland contains an emergent and fringe scrub-shrub plant community with a forested community off-site, and provides moderate to high levels of biological, chemical, and physical functions. A Biologist completed field data sheets (Appendix B) and a wetland rating form (Appendix C).

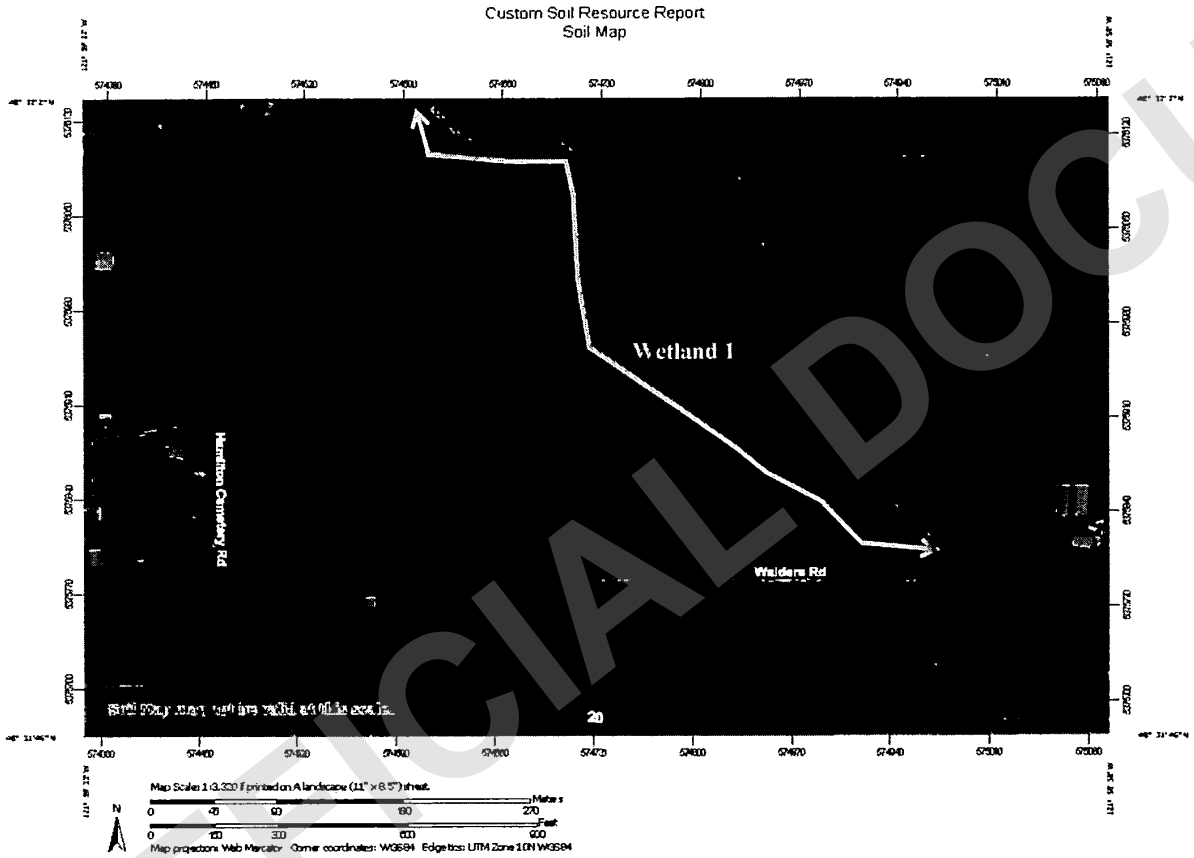


Figure 2. Approximate wetland and stream location and Mapped Soil Types (59-Giles silt loam; 61-Gilligan silt loam; 75-Indianola loamy sand, 0-5% slopes; 157-Wickersham silt loam, 0-8 slopes).

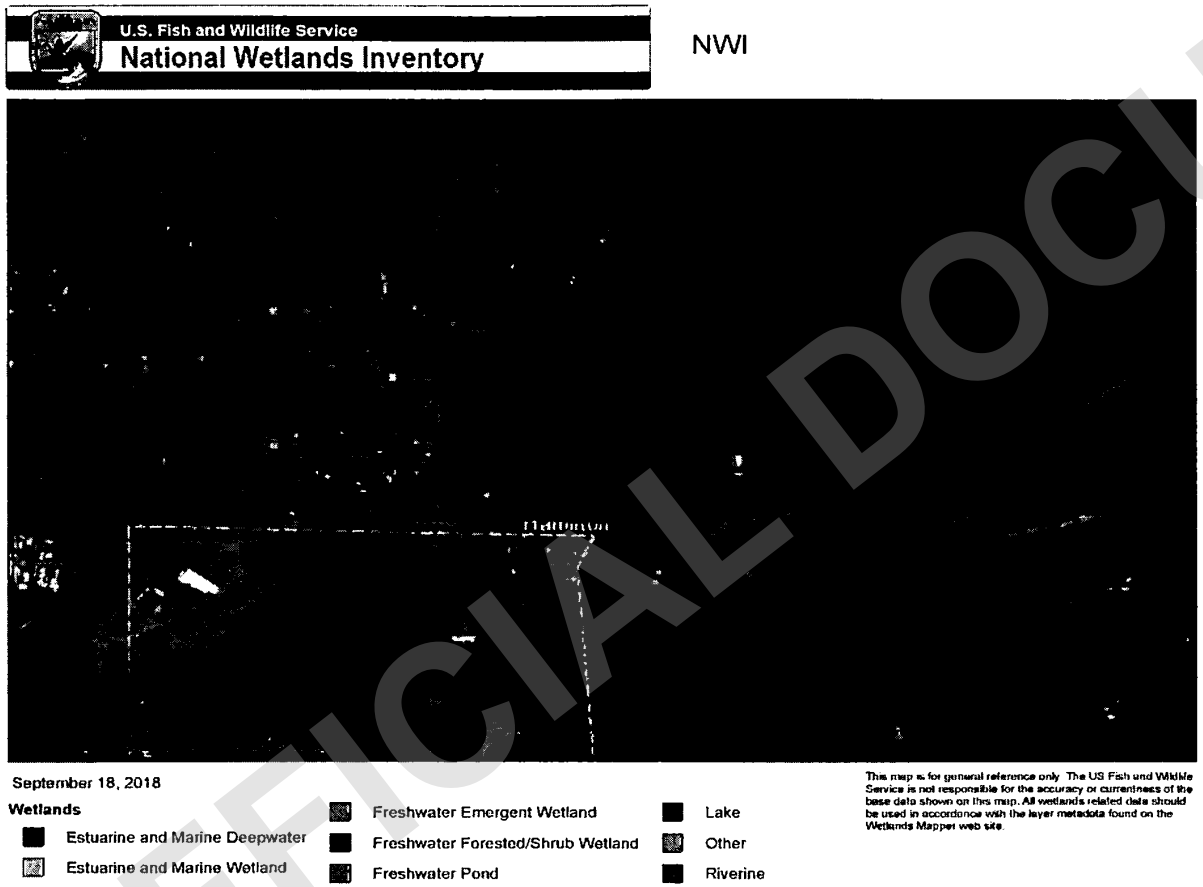


Figure 3. NWI map for the project area (site in red).

4.2.1 Wetlands

Wetland 1 is characterized as a palustrine emergent and scrub-shrub wetland on-site with forested areas observed off-site (FGDC 2013). It is situated in a large depression on the eastern side of the site with a stream flowing through the east side. The stream becomes indistinct from the wetland as it flows through the study area. Wetland 1 was estimated to be 14.6-acres in size by aerial review and extends off-site to the north and east.

The wetland is dominated by spike bentgrass (*Agrostis exarata*), soft stem bulrush (*Schoenoplectus tabernaemontani*), and common cattail (*Typha latifolia*), with lesser amounts of soft rush (*Juncus effusus*), timothy, velvet grass (*Holcus lanatus*), and tall fescue (Figure 4). Scrub-shrub fringe areas are dominated by Himalayan blackberry, red alder saplings, and scattered black twinberry (*Lonicera involucrate*), salmonberry, and willow (*Salix* spp.) (Figure 5). Forested wetland areas north of the investigated area were dominated by red alder and western red cedar trees with an understory of salmonberry, skunk cabbage (*Lysichiton americanus*), tall managrass (*Glyceria grandis*), and reed canarygrass (*Phalaris arundinacea*).

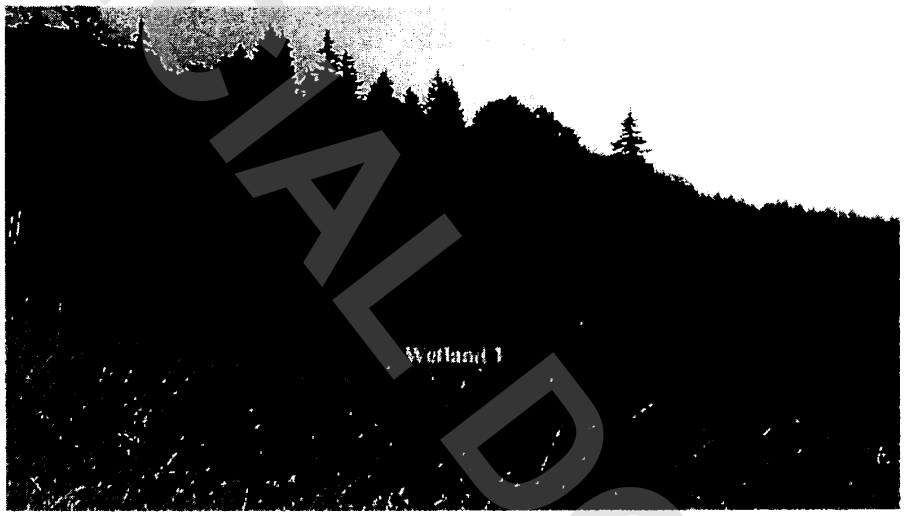


Figure 4. View of Wetland 1 facing east. Forested areas off-site to the north.

Figure 5. View of Wetland 1 along scrub-shrub fringe facing east.

The soil profile generally consists of a dark grey (N 4/0) clay loam from 0 to 12 inches where a hardpan clay layer was encountered. Hydric soil indicators, Hydrogen sulfide (A4) and Loamy gleyed matrix (F2), were met (Appendix B).

Drier than normal precipitation conditions were present in the 3 months and 10 ten days prior to field work (Appendix B-1). Groundwater likely serves as a source of hydrology for Wetland 1, with surface water input from the tributary to Careys Creek. At the time of the field investigation, primary hydrology indicators, Surface water (A1), High water table (A2), Saturation (A3), and Inundation visible on aerial imagery (B6) were met (Appendix B). The boundaries of Wetland 1 were flagged where indicators of wetland vegetation, hydric soil, and wetland hydrology were present. These corresponded to a distinct topographic depression.

Wetland 1 is characterized as a depressional outflow wetland using the HGM system. It is a Category III wetland according to the current Ecology (2014) rating system, providing moderate levels of water quality and hydrologic function, and high habitat function. Wetland Rating system points were assigned as follows:

Water Quality Score: 5 (Moderate level of function)

Hydrologic Score: 6 (Moderate level of function)

Habitat Score: 8 (High level of function)

Total 19

Wetland functions and values for Wetland 1 are detailed in Appendix C. The standard buffer width for a Category III wetland with high intensity land use (proposed greater than 1 residence/acre) is 150-feet (HMC 15.15.205-1).

Upland adjacent to the wetland is dominated by pasture grasses (mowed/planted) of tall fescue, tall Orchard grass, timothy, colonial bentgrass (*Agrostis capillaris*) with Canadian thistle (*Cirsium arvense*), and curly dock (*Rumex crispus*) also present (Figure 6). Soils were a very dark brown

(10YR 2/2) silty clay loam loam to a depth of 12-inches over a gray (2.5Y 5/1) silty clay loam with 10% faint grayish brown (2.5Y 5/2) redoximorphic concentrations in the matrix, not meeting any hydric soil indicators. Soils were dry (Appendix B). The buffer along the west side of Wetland 1 is maintained grasses providing less habitat functions. Buffer south of Wetland 1 is higher functioning mixed forested and shrub buffer, providing screening, filtration, water quantity, and wildlife habitat functions (Figure 7). Buffer edges do have invasive blackberry dominant in the understory near forested edges (Figure 5).

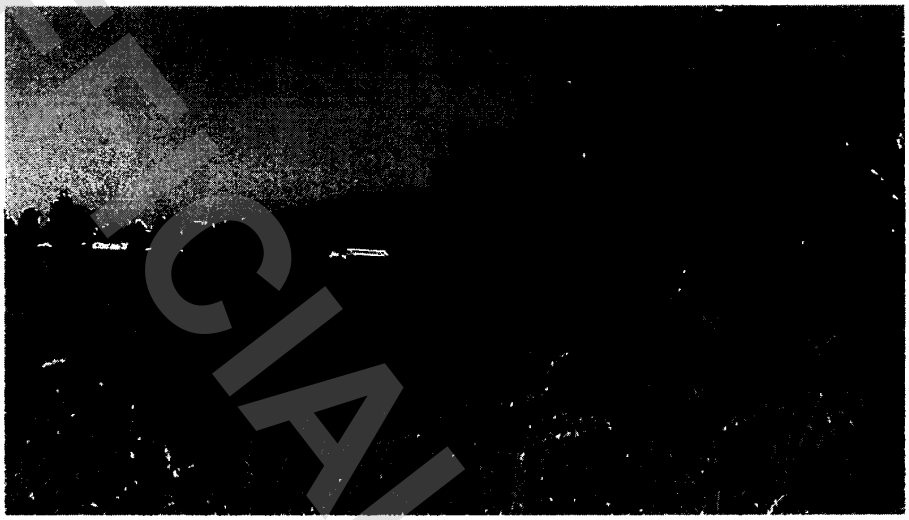


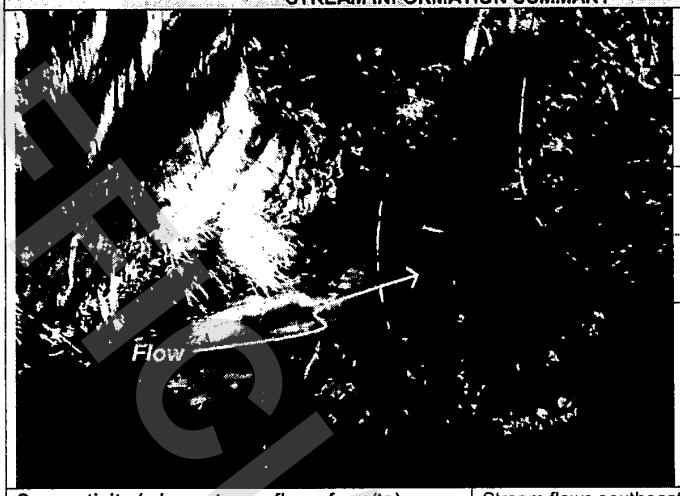
Figure 6. Pasture grasses along west side of Wetland 1.

Figure 7. Forested buffer of Wetland 1/tributary to Careys Creek.

4.3 Streams

In addition to wetland area, biologists delineated the ordinary high-water mark (OHWM) of the tributary to Careys Creek along the eastern side of the project site and evaluated Fish and Wildlife Habitat Conservation Areas in accordance with Hamilton Municipal Code 15.15.530. Habitat within the riparian buffer of the stream was evaluated for 1) recruitment of large woody debris (LWD); 2) shade; 3) bank integrity; 4) runoff filtration; and 5) wildlife habitat (Table 2).

Table 2. Tributary to Careys Creek-stream summary

STREAM INFORMATION SUMMARY		
	**Stream Name**	Tributary to Careys Creek
	WRIA	03
	WA Stream Catalog #	NA
	Local Jurisdiction	UGA of Hamilton
	Local Stream Type	Type 3
	Buffer Width	100 feet
Connectivity (where stream flows from/to)	Stream flows southeasterly along the north side of the property and into Wetland 1 where the stream becomes indistinct from the Wetland. Near the south end of Wetland 1, the stream has been channelized and flows south through the forested upland in the southeast corner of the site and through a 5-foot culvert under Walders Road, then under Highway 20. The stream flows about 0.6 miles to Careys Creek which flows into the mainstem lower Skagit River about 0.7 miles downstream (WDFW 2018a).	
Habitat Conditions	Habitat is primarily low gradient pool-riffle habitat. Upstream of Wetland 1, the creek is more natural (see photo above) while the section downstream of the wetland has been channelized and is downcutting. The OHWM of the stream varies from 10-12 feet wide. Gravels, small cobble, and fines dominate the channel substrate. LWD is present in the downstream channel but is largely small pieces.	
Riparian/Buffer Condition	On the north and south side of the site, mixed forested and shrub buffer exists along the stream. Forested buffer (described in Section 4.1.2) provides the potential for LWD recruitment, shade, bank integrity, run-off filtration, and wildlife habitat. Buffer along Wetland 1/tributary to Careys Creek that is mowed pasture provides some run-off filtration but no LWD recruitment potential, shade, and	

	less bank integrity and complex wildlife habitat. Invasive blackberry is dominant along open edges of the stream.

4.4 Threatened and Endangered Species, Priority Habitats and Species

National Marine Fisheries Service (NMFS 2012) identified Steelhead Trout and Chinook Salmon potentially present downstream of the project in Careys Creek with critical habitat for both species mapped in the mainstem Skagit River. The United States Fish and Wildlife Service (2017, 2018) listing of species under its jurisdiction indicated the presence of threatened Bull Trout (*Salvelinus confluentus*) and critical habitat downstream in the mainstem Skagit River. In addition, gray wolf (*Canis lupis*), marbled murrelet (*Brachyramphus marmoratus*), yellow billed cuckoo (*Coccyzus americanus*), and Oregon spotted frog (*Rana pretiosa*), and proposed species North American wolverine (*Gulo gulo luscus*) could be potentially present in the project vicinity. No critical habitats are mapped on the site (USFWS 2018).

4.4.1 Wildlife and Priority Species and Habitat

Wetlands, In-Stream, Riparian Areas, and Biodiversity Areas and Corridors are considered Washington State Priority Habitats and are present in the project area. Salmonid species including Coho Salmon and Cutthroat Trout present in the tributary to Careys Creek through the project area are considered Priority Species (WDFW 2016; 2018a and 2018b). The WDFW Priority Habitat and Species (PHS) database indicates a Townsend's big-eared Bat (*Corynorhinus townsendii*) communal roost within the same township as the project and the presence of an elk (*Cervus elaphus*) concentration area (WDFW 2018b). Townsend's big-eared Bat is found in lowland conifer-hardwood forest and roosts primarily in caves but will also roost in large trees or snags and in abandoned buildings (WDFW 2005).

Much of the historic landscape has been substantially altered by forestry, agriculture, and residential land use within the vicinity. Wildlife expected in the project area likely includes a variety of shrews, chipmunks, mice, voles, owls, raptors, falcons, and songbirds. All wetlands are likely to provide habitat for invertebrates: insects, spiders, and freshwater gastropod mollusks. Priority species that may be associated with aquatic habitats include western toad *(Anaxyrus boreas)* and blue heron (*Ardea herodias*). Amphibians observed include chorus frog (*Pseudacris triseriata*) and Pacific tree frog *(Pseudacris regilla)*. Evidence of elk, beaver (*Castor canadensis)*, black tailed deer (*Odocoileus hemionus*), and coyote (*Canis latrans*) was present. Observations of common snipe (*Gallinago delicata*), cedar waxwings (*Bombycilla cedrorum*), marsh wren (*Cistothorus palustris*), red-winged blackbird (*Agelaius phoeniceus*), song sparrow (*Melospiza melodia*), black capped chickadees (*Poecile atricapillus*), and American robins (*Turdus migratorius*) were made on-site.

LIMITATIONS

This report is based upon information collected in the field and obtained from resources provided by Federal, State, and Local agencies. Conclusions are the best professional judgement (BPJ) of the author are subject to approval by the appropriate agencies.

References

Brinson, M.M. 1993. *A Hydrogeomorphic Classification for Wetlands*. Technical Report WRPDE-4. US Amy Engineers Waterways Experiment Station, Vicksburg, MS.

Environmental Laboratory. 1987. Corps of Engineers wetland delineation manual. Technical Report Y-87-1, Environmental Laboratory, Department of the Army, Waterways Experiment Station, Vicksburg, MI.

Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC.

Franklin, J.F. and C.T. Dyrness. 1988. Natural vegetation of Oregon and Washington. Oregon State University Press, Corvallis, OR.

Hamilton, Town of. 2016. Critical Areas Ordinance (Ordinance No. 317), Chapter 15.15. Adopted January 12, 2016.

Hruby, T. (2014). *Washington State Wetland Rating System for Western Washington: 2014 Update*. (Publication #14-06-029). Olympia, WA: Washington Department of Ecology.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List*: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X. Accessed online at: http://rsgisias.crrel.usace.army.mil/NWPL/.

NMFS. 2012. National Oceanic and Atmospheric Administration, National Marine Fisheries Service. Species list website for ESA listed salmon species. Updated October 31, 2012. Accessed online at: http://www.westcoast.fisheries.noaa.gov/publications/protected_species/salmon_steelhead/status_of_esa_salmon_listings_and_ch_designations_map.pdf.

NRCS. 2018. Natural Resources Conservation Service [Internet]. US Department of Agriculture. Climate Data for Sedro-Woolley, WA. Available at: http://efotg.sc.egov.usda.gov/efotg_locator.aspx

USACE. 2010. United States Army Corps of Engineers. Final Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountain, Valley, and Coast Region, ed. J.S. Wakely, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-03-13. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

USDA, NRCS. 2010. United States Department of Agriculture, Natural Resource Conservation Service, in cooperation with the National Technical Committee for Hydric Soils. Field indicators of hydric soils in the United States guide for identifying and delineating hydric soils, version 7.0. Washington, D.C.

USDA, NRCS. 2012. United States Department of Agriculture, Natural Resource Conservation Service. Field book for describing and sampling soils, version 3.0. September 2012. Accessed online at: http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052523.pdf.

USDA, NRCS. 2015. United States Department of Agriculture, Soil Conservation Service in cooperation with the National Technical Committee for Hydric Soils. Hydric soils of the United States. Available online at http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/.

USDA, NRCS. 2018. United States Department of Agriculture, Natural Resource Conservation Service, in cooperation with the National Technical Committee for Hydric Soils. Field Indicators of Hydric Soils in the United States Guide for Identifying and Delineating Hydric Soils, version 8.2. Washington, D.C

USDA, NRCS. 2018. Soil survey of Project Area, Washington. U.S. Department of Agriculture, Natural Resource Conservation Service. Accessed online at: http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

USFWS. 1996. United States Fish and Wildlife Service, National Wetlands Inventory. NWI – National wetlands inventory in Washington State. Accessed online at: http://www.fws.gov/wetlands/Data/Mapper.html.

USFWS. 2017. Critical Habitat Mapper (Bull Trout, Chinook Salmon). Accessed online at: https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77

USFWS. 2018. Endangered Species Mapper for project site. Accessed online on at: https://ecos.fws.gov/ipac/.

WDF. 1975. Washington Department of Fisheries. A catalog of Washington streams and salmon utilization. Water Resource Inventory Area 03: Lower Skagit and Samish River Basin. Olympia, WA.

WDFW. 2005. Management Recommendations for Washington's Priority Species-Vol IV: Birds. Townsend's Big-Eared Bat. Accessed online at: https://wdfw.wa.gov/publications/00027/toba.pdf.

WDFW. 2008; updated 2016. Washington Department of Fish and Wildlife. Priority Habitat and Species List. Olympia, Washington. 177 pp. Accessed online at: http://wdfw.wa.gov/conservation/phs/list/.

WDNR. 2018. Washington Wetlands of High Conservation Value for T35N, R6E, Section 11. Accessed online at: http://wadnr.maps.arcgis.com/apps/webappviewer/index.html?id=5cf9e5b22f584ad7a4e2aebc63c47bda. .

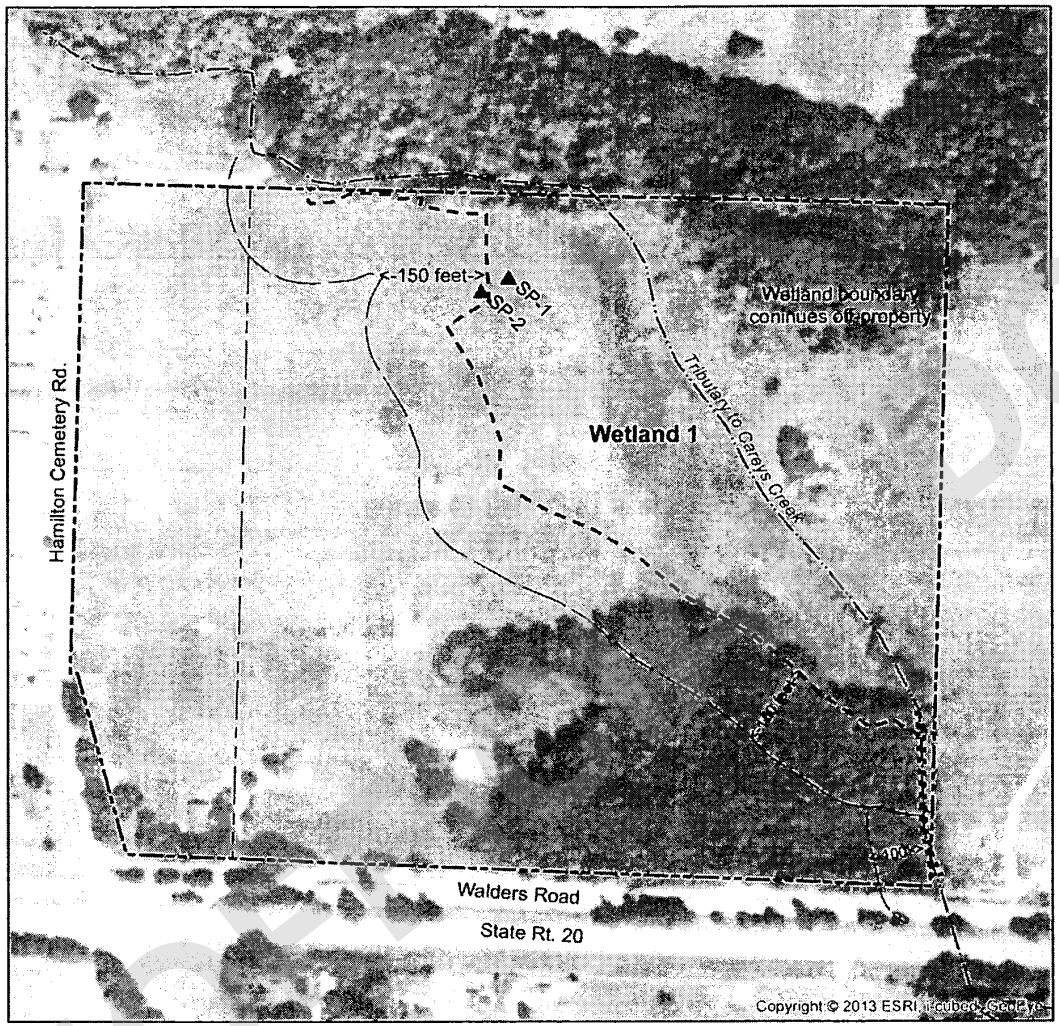
WDFW. 2018a. Washington State Department of Fish and Wildlife (WDFW) Salmonscape Maps. Accessed online at: http://apps.wdfw.wa.gov/salmonscape/map.html#.

WDFW. 2018b. Washington Department of Fish and Wildlife Priority Habitat and Species Report for site. Accessed online at: http://apps.wdfw.wa.gov/phsontheweb/.

WDOE. Ecology. 2016. Washington State Department of Ecology. Water Quality Assessments/TMDLs. Accessed on line at: https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx.

WSCC. 2002. Washington State Conservation Commission. Salmon Habitat Limiting Factors Final Report. Water Resource Inventory Area 03 and 04: Skagit River Watershed. Olympia, WA.

Appendix A — Existing Conditions



NAD83 (2011) State Plane WA-N FIPS4601

34753 Walders Rd.
Hamilton, WA
Wetland & Stream Delineations

Legend

- Approx. Stream Centerline
- Stream Buffer Line
- Stream OHWM Line
- Delineated Wetland Line
- Sample Points
- Parcel Line
- Property Line

0 105 210 420 630 Feet

HAMER ENVIRONMENTAL
Innovative Solutions to Natural Resource Issues

Appendix B — Data Sheets and Precipitation Data

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

Project Site: 34753 Welders Rd, Sedro-Woolley, WA City/County: Hamilton UGA /Skagit Sampling Date: 09/06/2018
Applicant/Owner: Forterra State: WA Sampling Point: WL1-SP1
Investigator(s): Kristin Murray, Trina Miller Section, Township, Range: S11, T35N, R6E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2%
Subregion (LRR): A Lat: 48° 31'59.34" Long: -121° 59'14.96" Datum: NAD83
Soil Map Unit Name: Galligan silt loam (non-hydric) NWI classification: PEM/PFO/PSS
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Sample plot is located at northern end of Wetland 1 in emergent area. Forested wetland continues off site to the north. A scrub-shrub wetland fringe is located on the southwestern and northwestern edges of the wetland on the investigated property. Climatic conditions were dry the 3 months prior to field work.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. ____			
2. ____			
3. ____			
4. ____			
50% = ____, 20% = ____		= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1. ____			
2. ____			
3. ____			
4. ____			
5. ____			
50% = ____, 20% = ____		= Total Cover	
Herb Stratum (Plot size: 15 ft)			
1. *Agrostis exarata*	45	yes	FACW
2. *Schoenoplectus tabernaemontani*	40	yes	OBL
3. *Phleum pratense*	30	no	FAC
4. *Festuca arundinacea*	15	no	FAC
5. *Holcus lanatus*	15	no	FAC
6. *Juncus effusus*	10	no	FACW
7. ____			
8. ____			
9. ____			
10. ____			
11. ____			
50% = 77.5, 20% = 31	155	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1. ____			
2. ____			
50% = ____, 20% = ____		= Total Cover	
% Bare Ground in Herb Stratum ____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	____	x1 =	____
FACW species	____	x2 =	____
FAC species	____	x3 =	____
FACU species	____	x4 =	____
UPL species	____	x5 =	____
Column Totals:	____ (A)		____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: 100% of the vegetation is rated FACW or OBL, so hydrophytic indicator is met. Forested wetland off-site is dominated by red alder, scattered western red cedar, salmonberry, skunk cabbage, tall mannagrass, and soft rush. Shrub-shrub areas were dominated by Himalayan blackberry with scattered red alder saplings, salmonberry, black twinberry, and willow saplings. Reed canarygrass is present along wetland edges as well.

Project Site: 34753 Walders Rd, Sedro-Woolley, WA

SOIL Sampling Point: WL1-SP 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	N 4/0	100	NA	NA	NA	NA	CL	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: 12

Depth (inches): hardpan clay layer

Hydric Soils Present? Yes ☒ No ☐

Remarks: Hydric soil indicators A4 and F2 were met.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ☒	No ☐	Depth (inches):	1-2	
Water Table Present?	Yes ☒	No ☐	Depth (inches):	1	
Saturation Present? (includes capillary fringe)	Yes ☒	No ☐	Depth (inches):	0	**Wetland Hydrology Present?** Yes ☒ No ☐

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

Remarks: Primary indicators A1, A2, A3, and B7 were met. Secondary indicators B10 and D2 were also observed.

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

Project Site: 34753 Walders Rd, Sedro-Woolley, WA City/County: Hamilton UGA /Skagit Sampling Date: 09/6/18
Applicant/Owner: Forterra State: WA Sampling Point: WL1-SP2
Investigator(s): Kristin Murray, Trina Miller Section, Township, Range: S11, T35N, R6E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 3-4%
Subregion (LRR): A Lat: 48° 31'58.99" Long: -121° 59'16.79" Datum: NAD83
Soil Map Unit Name: Galligan silt loam (non-hydric) NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Sample plot 2 is located about 60 feet west of SP1 in field. Field is mowed/planted. Climatic conditions drier than normal 3 months prior to field visit.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
50% = ____, 20% = ____		= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
50% = ____, 20% = ____		= Total Cover	
Herb Stratum (Plot size: 15 ft)			
1. *Festuca arundinacea*	40	yes	FAC
2. *Dactylis glomerata*	40	yes	FACU
3. *Agrostis capillaris*	35	yes	FAC
4 *Phleum pratense*	25	no	FAC
5.			
6.			
7			
8.			
9			
10.			
11.			
50% = 70, 20% = 28	140	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1			
2			
50% = ____, 20% = ____		= Total Cover	
% Bare Ground in Herb Stratum ____			

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	67	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	____	x1 =	____
FACW species	____	x2 =	____
FAC species	____	x3 =	____
FACU species	____	x4 =	____
UPL species	____	x5 =	____
Column Totals:	____ (A)		____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: More than 50% of the vegetation is rated FAC; however, field has likely been seeded grown for pasture grasses. Other vegetation includes Canadian thistle, curly dock

Project Site: 34753 Walders Rd, Sedro-Woolley, WA

SOIL Sampling Point: WL1-SP 2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/2	100	NA	NA	NA	NA	SiCL	
12-14	2.5Y 5/1	90	2.5Y 5/2	10	C	M	SiCL	faint redox

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: 14

Depth (inches): hardpan clay layer

Hydric Soils Present? Yes ☐ No ☒

Remarks: No hydric soil indicators are met

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):
Water Table Present?	Yes	☐	No	☒	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks: No hydrology indicators were met. Soils were dry

Appendix B-1: Comparison of Observed and Normal Precipitation

The Regional Delineation Supplement Version 2.0 (USACE 2010) recommends using methods described in Chapter 19 in *Engineering Field Handbook* (NRCS 1997) to determine if precipitation occurring in the three full months prior to a site visit was normal, drier than normal, or wetter than normal. Actual rainfall is compared to the normal range of the 30-year average. Drier than normal precipitation conditions occurred in the three months prior to September 6, 2018 field work (Table 1). Drier than normal precipitation occurred in the ten days prior to the September field work (Table 2). The nearest WETS station location in Sedro-Woolley, Washington was selected to determine if normal precipitation conditions were present prior to field work.

Table 1. For September 6, 2018 field work - Monthly precipitation data for Sedro-Woolley, Washington.

		Long-term rainfall records[a]							
	Month	3 yrs. in 10 less than	Average	3 yrs. in 10 more than	Rain fall[b]	Condition dry, wet, normal[c]	Condition Value	Month weight value	Product of previous two columns
1st prior month	August	0.78	1.58	1.91	0.61	D	1	3	3
2nd prior month	July	0.90	1.70	2.04	0.59	D	1	2	2
3rd prior month	June	1.91	2.84	3.40	2.70	N	2	1	2
								Sum	7

[a] NRCS 1997
[b] NRCS 2018.
[c] Conditions are considered normal if they fall within the low and high range around the average.

Note: If sum is
- 6 - 9 then prior period has been drier than normal
- 10 - 14 then period has been normal
- 15 - 18 then period has been wetter than normal

Condition value:
- Dry (D) =1
- Normal (N) =2
- Wet (W) =3

Conclusion: Drier than normal precipitation conditions were present prior to the September 6, 2018, field work.

Table 2. Daily Precipitation 10 days preceding September 6, 2018, field work

Date (2018)	Daily Precipitation (inches) *
Sept 5	0.0
Sept 4	0.0
Sept 3	0.0
Sept 2	0.0
Sept 1	0.0
August 31	0.0
August 30	0.0
August 29	0.0
August 28	0.0
August 27	0.11

*NRCS 2018

References:

NRCS 1997. Natural Resource Conservation Service. 1997. Hydrology Tools for wetland determination. Chapter 19 in Engineering Field Handbook. Fort Worth (TX): US. Department of Agriculture, NRCS. http://www.wsdot.wa.gov/NR/rdonlyres/0685A8C8-0512-4568-BE7F-6FF6D75C15ED/0/WetDelinCh19.pdf.

NRCS. 2018. Natural Resources Conservation Service [Internet]. June, July, August, September, 2018. US Department of Agriculture. Climate Data for Sedro-Woolley, WA. Available at: http://efotg.sc.egov.usda.gov/efotg_locator.aspx.

Appendix C — Rating Form

Wetland name or number 1

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland 1 Date of site visit: 9/6/2018

Rated by Kristin Murray Trained by Ecology? ☑ Yes ☐ No Date of training 6/7/2014

HGM Class used for rating Depressional & Flats Wetland has multiple HGM classes? ☐ Yes ☑ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map Aerials (GoogleEarth)

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
X **Category III** - Total score = 16 - 19
_____ **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List appropriate rating (H, M, L)			
Site Potential	M	M	M	
Landscape Potential	M	M	H	
Value	L	M	H	**Total**
Score Based on Ratings	5	6	8	**19**

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	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	X

Wetland name or number 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	1
Hydroperiods	D 1.4, H 1.2	1
Location of outlet (*can be added to map of hydroperiods*)	D 1.1, D 4.1	1
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	D 2.2, D 5.2	2
Map of the contributing basin	D 4.3, D 5.3	3
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	4
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	5
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	6

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 another figure*)	S 4.1	
Boundary of area within 150 ft of the wetland (*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 name or number 1

HGM Classification of Wetland in Western Washington

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

☑ 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.

Wetland name or number 1

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.*

NOTES and FIELD OBSERVATIONS:
Wetland extends off-site to the north. Riverine wetland is present adjacent to the stream but overall wetland is depressional.

Wetland name or number 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). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 ☑ Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 ☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1	1
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*). Yes = 4 No = 0	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 points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0	3
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0	4
Total for D 1 Add the points in the boxes above	**8**

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

D 2.0. Does the landscape have the potential to support the water quality function of the site?	
D 2.1. Does the wetland unit receive stormwater discharges? Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants? Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland? Yes = 1 No = 0	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 elk herd seen on site in wetland Yes = 1 No = 0	1
Total for D 2 Add the points in the boxes above	**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	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	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 for the basin in which the unit is found*)? Yes = 2 No = 0	0
Total for D 3 Add the points in the boxes above	**0**

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

Wetland name or number 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:		2
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	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.*		3
Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
☑ Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
☐ The wetland is a "headwater" wetland	points = 3	
Wetland is flat but has small depressions on the surface that trap water	points = 1	
Marks of ponding less than 0.5 ft (6 in)	points = 0	
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.*		3
☐ The area of the basin is less than 10 times the area of the unit	points = 5	
The area of the basin is 10 to 100 times the area of the unit	points = 3	
The area of the basin is more than 100 times the area of the unit	points = 0	
☐ Entire wetland is in the Flats class	points = 5	
Total for D 4	Add the points in the boxes above	**8**

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

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

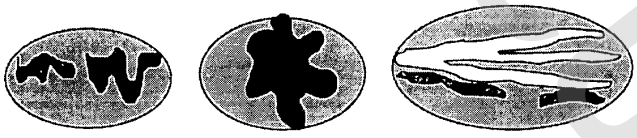
D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.*		1
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.	points = 2	
☐ • Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
☐ Flooding from groundwater is an issue in the sub-basin.	points = 1	
☑ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why	points = 0	
☐ There are no problems with flooding downstream of the wetland.	points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0	0

Wetland name or number 1

Total for D 6	Add the points in the boxes above	1

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

Wetland name or number 1

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.* ☐ Aquatic bed — 4 structures or more: points = 4 ☑ Emergent — 3 structures: points = 2 ☑ Scrub-shrub (areas where shrubs have > 30% cover) — 2 structures: points - 1 ☑ Forested (areas where trees have > 30% cover) — 1 structure: points = 0 *If the unit has a Forested class, check if:* ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon	2
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 or ¼ ac to count (*see text for descriptions of hydroperiods*). ☑ Permanently flooded or inundated — 4 or more types present: points = 3 ☑ Seasonally flooded or inundated — 3 types present: points = 2 ☐ Occasionally flooded or inundated — 2 types present: points = 1 ☑ Saturated only — 1 types present: points = 0 ☑ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ **Lake Fringe wetland** — **2 points** ☐ **Freshwater tidal wetland** — **2 points**	3
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 1

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☑ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☑ Standing snags (dbh > 4 in) within the wetland ☐ 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) ☐ 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*) ☑ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by amphibians*) ☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	3
Total for H 1 Add the points in the boxes above	12

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☑ **7 - 14 = M** ☐ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 25 % undisturbed habitat + (32 % moderate & low intensity land uses / 2) = 41% 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	3
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 50 % undisturbed habitat + (35 % moderate & low intensity land uses / 2) = 67.5% 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	3
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 1km Polygon is high intensity points = 0	0
Total for H 2 Add the points in the boxes above	6

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

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated*. Site meets ANY of the following criteria: points = 2 ☑ It has 3 or more priority habitats within 100 m (see next page) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☑ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ 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) with in 100m points = 1 Site does not meet any of the criteria above points = 0	2

Wetland name or number 1

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

Wetland name or number 1

WDFW Priority Habitats

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

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

- ☐ **Aspen Stands**: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- ☑ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- ☐ **Herbaceous Balds**: Variable size patches of grass and forbs on shallow soils over bedrock.
- ☐ **Old-growth/Mature forests**: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west of the Cascade crest.
- ☐ **Oregon White Oak**: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- ☑ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- ☐ **Westside Prairies**: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- ☑ **Instream**: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- ☐ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- ☐ **Caves**: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- ☐ **Cliffs**: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- ☐ **Talus**: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- ☑ **Snags and Logs**: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.

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

Wetland name or number 1

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.*	Category
SC 1.0. Estuarine Wetlands Does the wetland meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal, ☐ Vegetated, and ☐ With a salinity greater than 0.5 ppt ☐ Yes - Go to **SC 1.1** ☑ No = **Not an estuarine wetland**	
SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? ☐ Yes = **Category I** ☐ No - Go to **SC 1.2**	
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are *Spartina*, see page 25) ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. ☐ The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. ☐ Yes = **Category I** ☐ No = **Category II**	
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? ☑ Yes - Go to **SC 2.2** ☐ No - Go to **SC 2.3** SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? ☐ Yes = **Category I** ☑ No = **Not WHCV** SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes - **Contact WNHP/WDNR and to SC 2.4** ☐ No = **Not WHCV** SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? ☐ Yes = **Category I** ☐ No = **Not WHCV**	
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	

Wetland name or number 1

in Table 4 provide more than 30% of the cover under the canopy?
☐ Yes = **Is a Category I bog** ☐ No = **Is not a bog**

Wetland name or number 1

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**

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*)

☐ 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 on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^1/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☑ No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

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

☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

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

☐ Yes = **Category III** ☐ No = **Category IV**

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

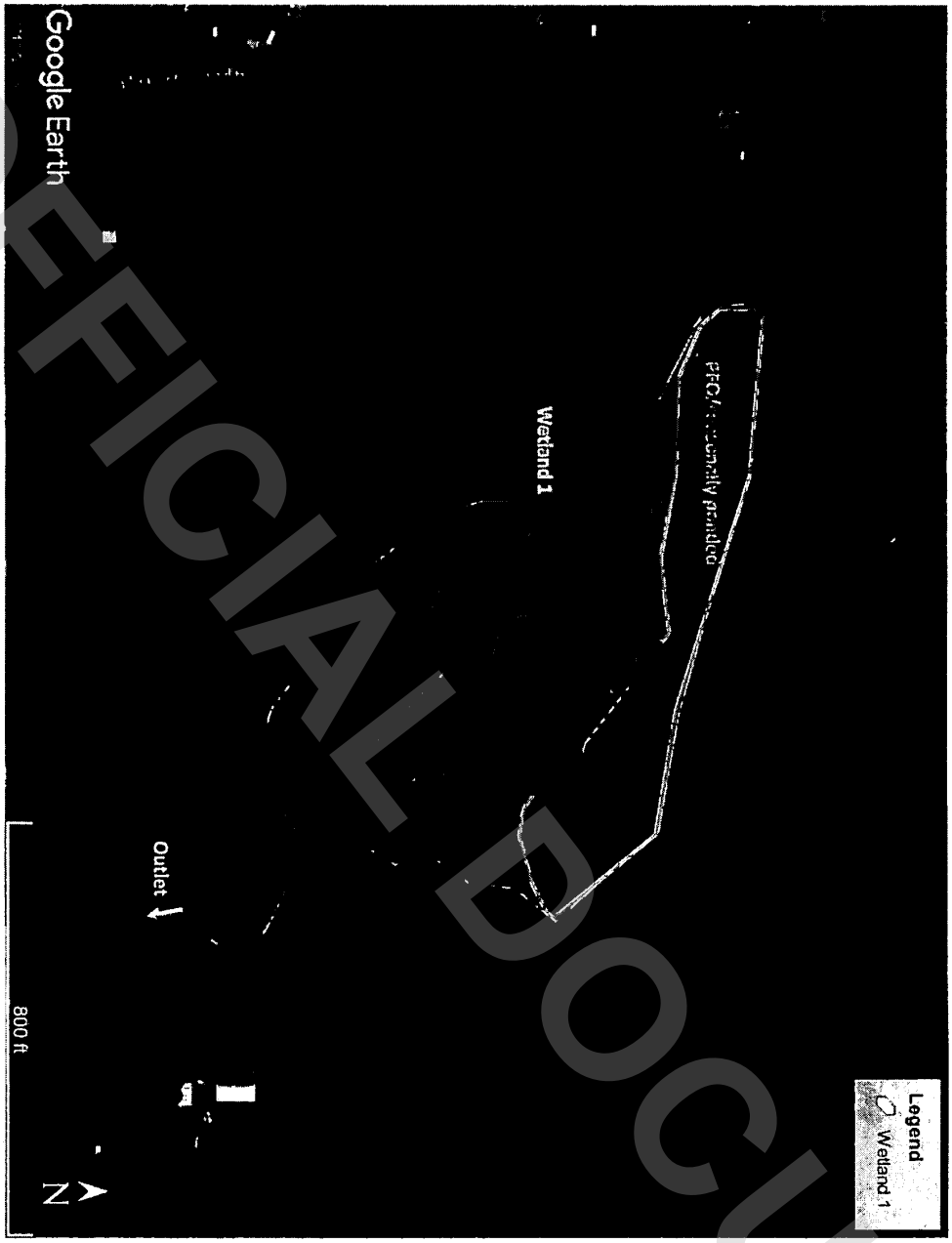


Figure 1. Wetland 1 (approximate boundaries): Cowardin, hydroperiod, outlet.

Figure 2. Wetland 1 150-foot buffer (in red) (approximate boundaries).

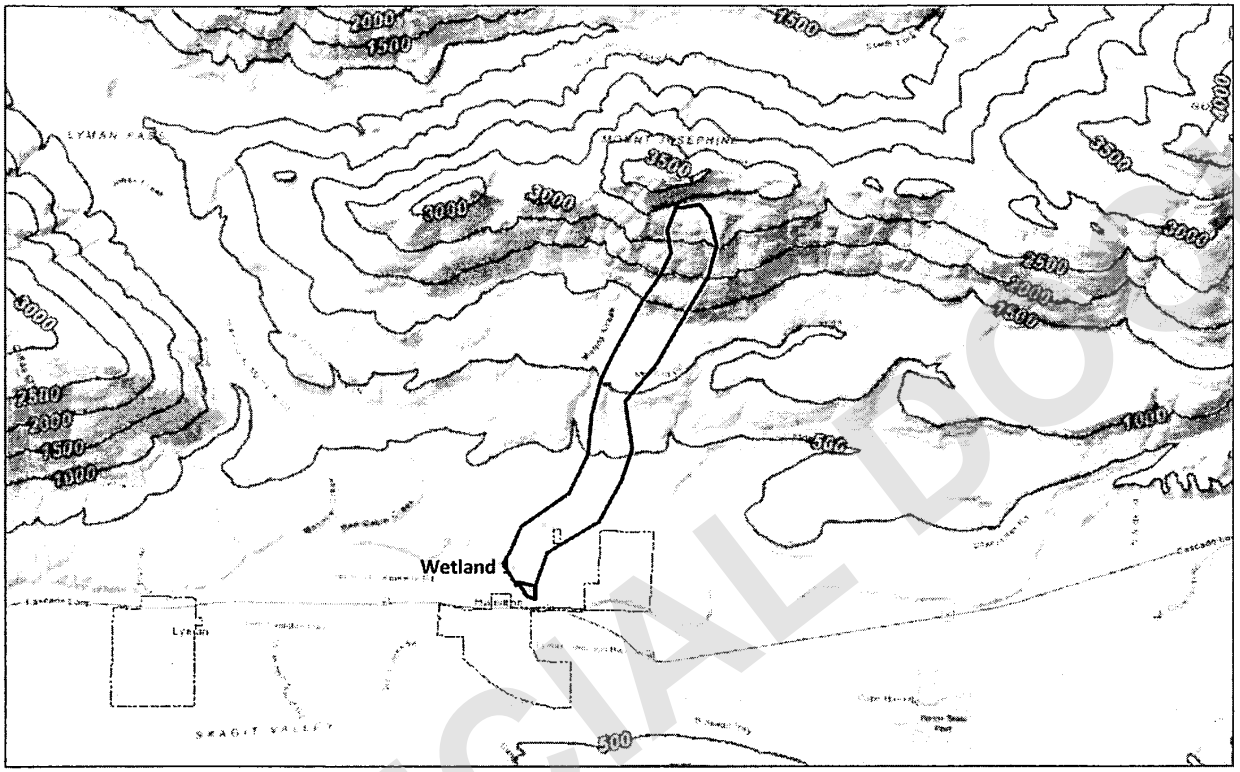


Figure 3. Wetland 1 estimated Contributing Basin (in blue).

Figure 4. 1 KM buffer around Wetlands 1 (in yellow). Relatively undisturbed areas (in white). High intensity (high intensity residential/industrial) (in orange). Remaining land use in low/moderate use (less than 1 residence/acre, moderate intensive agricultural, utility corridor).

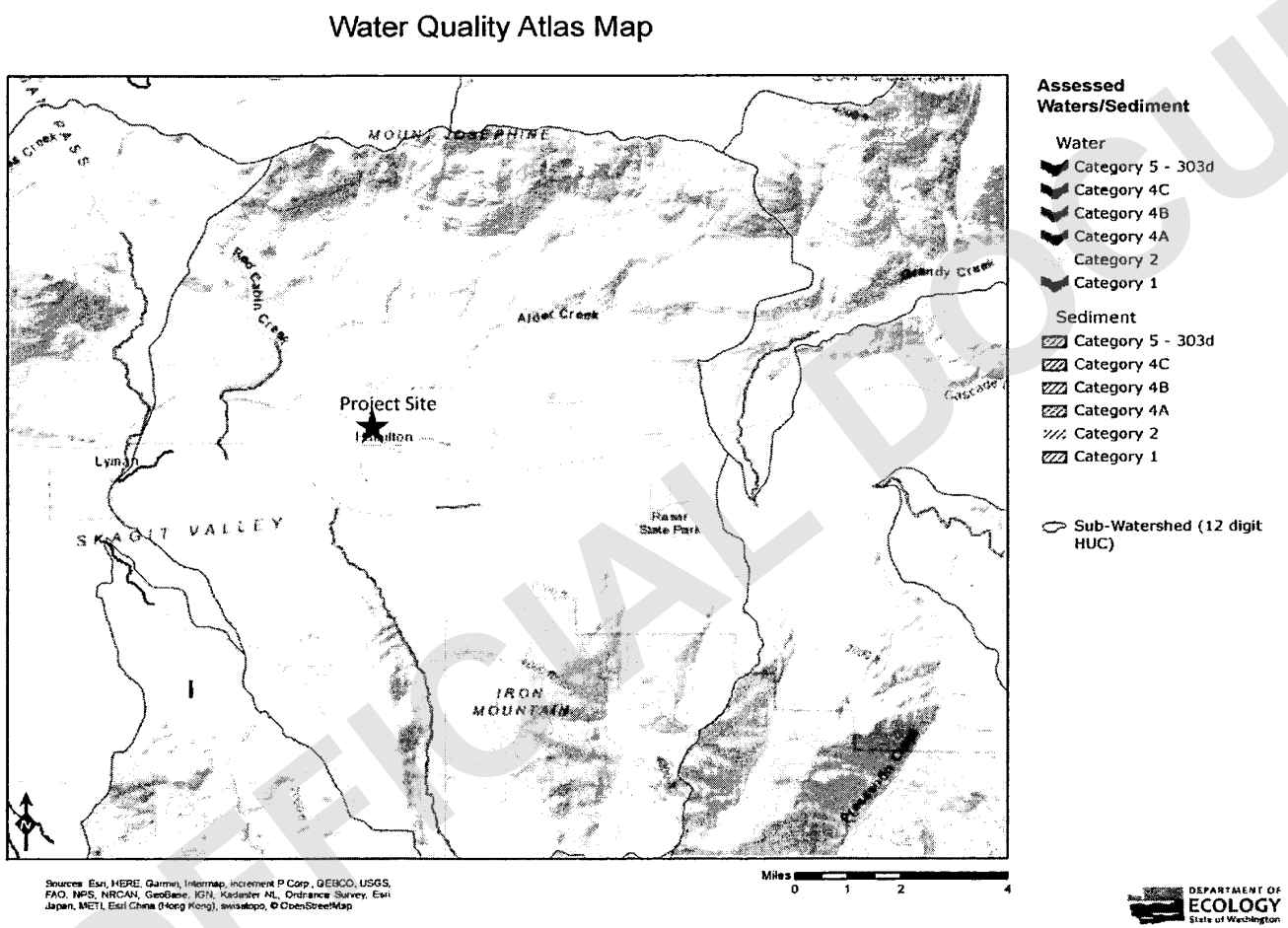


Figure 5. 303 (d) listings in basin.

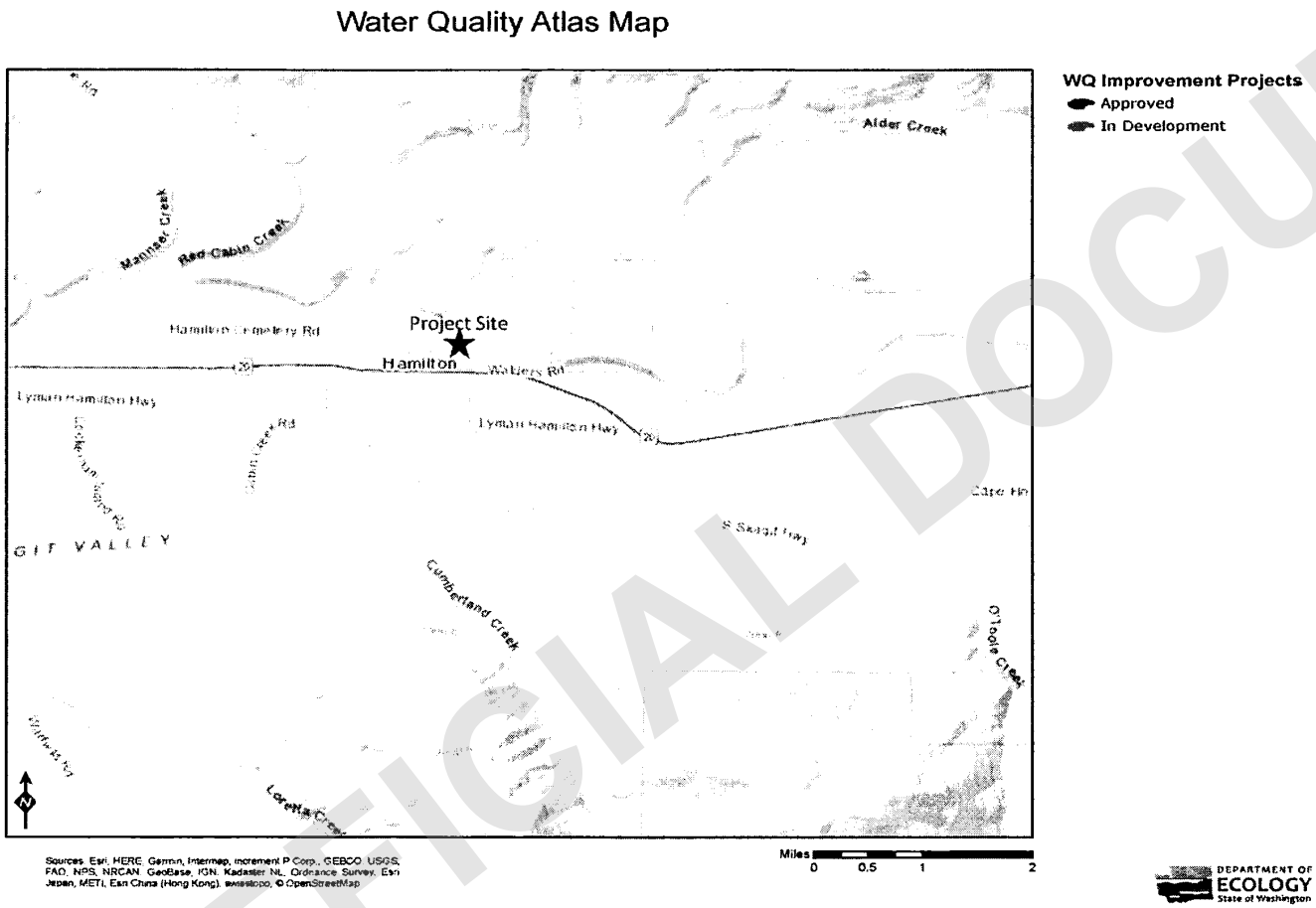


Figure 6. No TMDLs within 1 mile of project.

EXHIBIT D
Phasing Plan

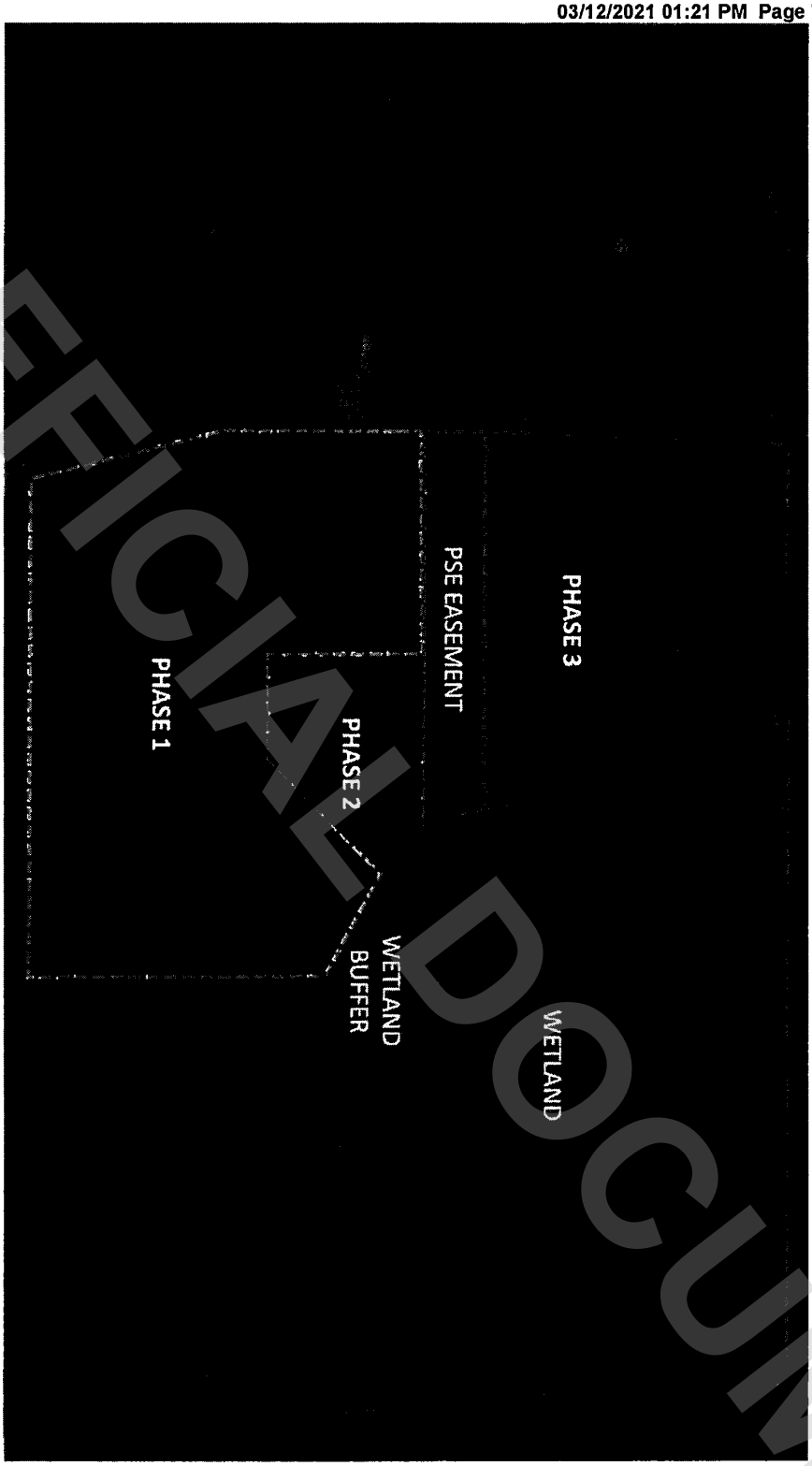


EXHIBIT E
Sustainability Plan

PROJECT REQUIREMENTS

Requirements included the financial constraints to limit costs for infrastructure to $75,000 per lot. As a result, the project seeks low-cost solutions to managing the energy, water and carbon solutions needed to meet the project's sustainable goals. Some of the infrastructure requirements include:

- Extensive solar panels and whole house batteries to achieve Net Zero Energy in each building and minimize impact to utilities.
- Collection of rainwater at each roof with attic storage for flushing and avoiding well water source demand.
- A low-slope stormwater management with vegetated treatment and ground water injection.
- Use of wastewater treatment technology developed by Sedron (formerly Janicki Industries), Ovivo, or others to intensively treat sewage to high quality water for site infiltration or reuse. Note that the energy requirements for a system like this may be a natural limiter, given the goal for Net Zero Energy, so site mounted solar panels will likely be needed to meet these requirements
- Integration of wetland buffer mitigation plantings to enable 25% buffer depth reduction (from 225 feet to 169.5 feet) through improved habitat and ecosystem performance.

SUSTAINABILITY GOALS

In addition to providing a safer place to live for community residents, this project is intended to provide a model for development on rural sites which serves and supports the ecosystem in which it is located. The increasing risk for communities to relocate means that a model like this may be needed in many other locations. As a result, this project aspires to the following sustainability goals:

- **Net Zero Energy** – with rooftop solar area to serve annual net energy needs of each dwelling or commercial property
- **Net Zero Water** – with conservation strategies to enable community potable, storm and wastewater requirements to be met on-site, including use of the community well.
- **Net Zero Carbon** – with durable construction materials that sequester as much atmospheric carbon as are embodied in other materials, while limiting the amount of net carbon added to the air.

The goals that have been established to serve the community and the environmental intentions are consistent with the Living Community Challenge, issued by the International Living Future Institute. Other rating systems to consider, include LEED V4 and the WELL Community Standard. The current document represents the first step towards achieving LCC certification.

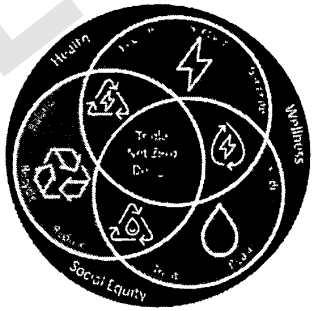


Fig. 3 - **TRIPLE NET ZERO DIAGRAM**

HAMILTON - PAST AND FUTURE

The Town of Hamilton, Washington floods regularly when heavy rains overflow the Skagit river's edge. In 2007, a process was put in place to find a way to help the town move to higher ground, however, this was derailed by the Great Recession.

The current Mayor has brought together the community of approximately 80 households and has developed consensus on a plan to locate opportunities for the community to move to properties out of the flood plain. It is anticipated that funding for purchasing and remediating houses currently inside the floodplain will be provided by a combination of sources, including FEMA. The existing properties are valued between $180,000 and $250,000.

Forterra has signed a Purchase and Sale Agreement for the new site, which was identified in 2007 as the Urban Growth Area. Closing on the property is anticipated in the first quarter of 2019. The new site is intended to create new opportunities for homeowners to move out of the flood plain.

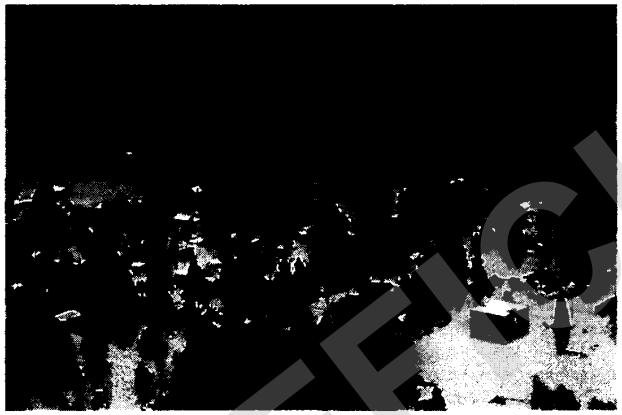


Fig 4 - TOWN OF HAMILTON FLOODING

ENGINEERING AND INFRASTRUCTURE

The Hamilton Center project is located on a parcel of land located north of Washington State Highway 20. Of the 40-plus acres, more than 22 acres are dedicated to wetlands and wetland buffer zones. The remaining 18.8 acres are proposed for the development of at least 250 residential units in a combination of single family houses, and a series of rowhouses and apartments, as well as approximately 40,000 SF of commercial area.

Preparing the site for housing requires fill to raise areas of the site and promote positive drainage. The existing site slopes from northwest to southeast at approximately one percent. The drainage will be divided into several small basins in order to limit the amount of fill, along with the detention area extents and depths. Raising portions of the site is needed to introduce slopes to carry drainage to the eastern and central edges of the development. The existing southern portion of the site has little to no slope. Fill in this area is required to elevate the commercial area and allow drainage to flow to reach various water quality and detention facilities.

Addressing drainage through the site without significant increases in slopes and fill requires drainage be promoted across the surface of the site. Housing and commercial areas drain to the streets and alleys. The streets and alleys carry the flows to the distributed water quality and detention facilities. Runoff is reduced through roof-top rain capture to be used used for flush flows, rain gardens, and in some cases stored in bio-detention vaults and bio-filtration swales. Shallow detention areas are integrated into the buffer zone landscaping to the east and within portions of the 100 foot-wide easement through the center of the site to support infiltration of this run-off.

Transportation for Hamilton Center is provided through multiple connections to Cemetery Road and internal circulation streets. Throughout the development, a neighborhood character is promoted with low-speed streets providing two travel lanes and street parking on one side. Alleys between the streets provide corridors for access to residential carports and garages as well as routing of utilities. The streets are asphalt paved with curb and gutter. The alleys are surfaced with aggregate base course and a centerline concrete drainage channel.

The Town of Hamilton's water system will supply the primary source of water for the Hamilton Center development. The water source is a well with storage tanks located up slope to the north of the property. Two mains will be extended from the existing trunk line north of the site to provide the primary loops of the distribution system. Water loops continue through the development providing potable water and fire protection service. Water demands of Hamilton Center are reduced through provisions of

rainwater capture using 300 gallon shallow storage tanks in residential attic space. The estimated quantities of water usage for Hamilton Center in the peak months are as follows:

- Potable water service at 52,500 gallons per day.
- Rain capture for flush water at 14,200 gallons per day.

A sanitary sewer collection system is routed throughout the development, conveying flows to the infrastructure zone in the southeast portion of the site. Treatment is provided on-site by a wastewater processor, with the Sedron (formerly Janicki Industries) Varcor unit or similar as the basis for the system. Clean water produced by the system will be infiltrated into available land in the wetland buffer.

In order to meet site requirements for water management, there are three critical calculations to demonstrate feasibility:

Wastewater Management – Capacity of Wastewater Treatment Processor system to manage sewage on site

- For the wastewater processor to meet development needs, it will need to manage approximately 54,000 gallons per day. The energy use requirements of the wastewater device will play a role in determining feasibility of this project element.
- The treated water discharge from the system is less than 1,800 gallons per hour and can be utilized during the driest periods of the year to irrigate a portion of the development. During the remainder of the year, the treated water will be released in the preserved forest area into shallow bermed catchments to provide for natural infiltration. A point source discharge permit will be needed for this flow.

Stormwater Management – Ability to absorb storm event rainwater into the ground on site

- The site presents two primary challenges to rainwater absorption – soil percolation rate and slope. There are only certain areas onsite that will absorb significant rainfall. These are the easement, continuing south of the easement on the eastern edge of the developable area several hundred feet, and at the current farmhouse, approximately where the town center is planned to be.
- The site slopes approximately 15 feet over the north-south dimensions of the site. Approximately 10 feet of this is north of the easement. This means that it will be fairly straightforward to sheet flow rainwater to swales running alongside the easement when this phase of work is built.
- South of the easement the site is much flatter, so care will be needed to develop these areas to maximize water absorption in place, using retention structures and pervious paving in some areas.
- To reduce the stormwater flow rates through the development, the residential and infrastructure lots will provide rain capture for flush flows and downspout infiltration to address 45 to 60 percent of the lots runoff. The remaining runoff will be directed by sheet flow to the streets and alleys and conveyed to shallow detention/infiltration/evapotranspiration basins.
- The commercial lot utilizes rain capture for flush flows, pervious pavement in the streets, rain gardens and an absorption structure with injection well to reduce runoff by 60 to 70 percent. The remaining runoff is routed through streets to the east and to shallow detention/infiltration/evapotranspiration basins within the preserved forest area.
- Stormwater absorption structure with injection well. The segmented structure provides sedimentation and biofiltration of the runoff before reaching the gravity injection well. This would be planted and appear as a terraced garden when complete.
- Final water quality treatment and runoff rate detention is provided in shallow detention/infiltration/evapotranspiration basins located along the east side of the development in the wetlands buffer, within the preserved forest area, and along the center of the site in the Puget Sound Energy (PSE) easement. Drainage facilities within the PSE easement will be located to not affect the structures, or access to them.

Hamilton Wastewater Calculations

Building Types	Blackwater			Graywater		Overall Daily Totals
	Number of Units	Gallons/Day	Total Gal/Day	Gallons/Day	Total Gal/Day	Total Gal/Day
1050 SF Units	105	28.8	3024	120	12600	15624
1400 SF Units	75	38.4	2880	160	12000	14880
2000 SF Houses	20	38.4	768	160	3200	3968
500 SF Apartments	27	19.2	518	80	2160	2678
800 SF Apartments	27	28.8	778	120	3240	4018
1000 SF Commercial	40	219.8	8552	100.4	4016	12568
			16520		37216	53736

Fig 5 WASTEWATER CALCULATIONS

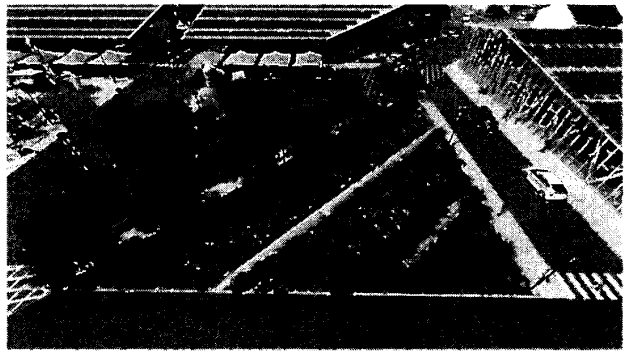


Fig. 6 - STORM WATER GARDEN AND INJECTION WELL

Well capacity

- For the existing well system to be able to meet community needs, existing connections need to be taken into account as well as the future demand. Note that the commonly used method to calculate this is through Equivalent Residential Units (ERU's) constructed using a standard formula, which does not take significant conservation measures into account.
- For the purposes of this report, an analysis of actual consumption was done, taking into account the site conditions for each unit type. This calculation shows that when fully built out the well maximum demand on the community well would be at 75 percent of its capacity. Note that this was modeled for a drought year in based on the low rainfall month of July with inadequate rainfall contribution for flushing and irrigation, which skews the number upward. The normal average annual demand would be significantly less. This results in an average annual demand for the community well at 52% of the existing capacity. However, this does indicate that other potable water needs beyond the Hamilton Center parcel would be likely to exceed capacity.
- In a typical weather year, the rooftop rainfall storage strategy should provide for flushing needs for a typical residential unit according to the graph, see Fig 7.

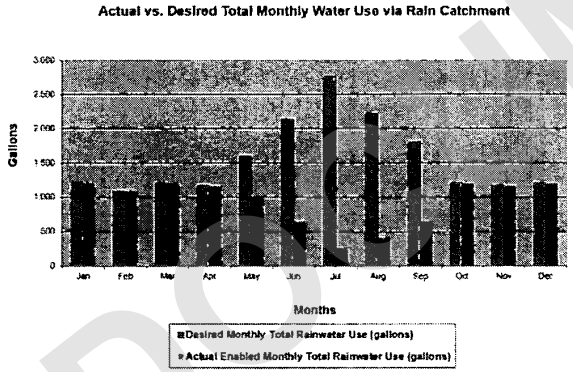


Fig. 7 - RAIN CATCHMENT GRAPH

Hamilton Potable water Calculations

Building Types	Numer of Units	Rainwater Supplemented Gallons/Day	Total Gal/Day	Potable Gallons/Day	Total Gal/Day	Overall Daily Totals Total Gal/Day
1050 SF Units	105	28.8	3024	120	12600	15624
1400 SF Units	75	38.4	2880	160	12000	14880
2000 SF Houses	20	38.4	768	160	3200	3968
500 SF Apartments	27	19.2	518	80	2160	2678
800 SF Apartments	27	28.8	778	120	3240	4018
1000 SF Commercial	40	237.6	9504	111.6	4464	13968
			17472		37664	55136
					Potable (+10%)	60650
					Peak Irrigation	19577
					Daily Demand	80227
					Annual Demand	29,282,799

Well Supply	Flow (GPM)	24 * 60	Daily supply
	106	1440	152640
	Current Demand		Annual Supply
	12,256,800		55,713,600
	Current + Future Annual Demand		41,532,709
	Demand Percent of Well Capacity		75%

Fig. 8 - HAMILTON POTABLE WATER AND WELL CAPACITY CALCULATION

EXHIBIT F
Tentative Site Plan

FORTGRRA

Site Plan

1.2

New Hamilton

a new neighborhood in Hamilton, WA

QUIGG & ASSOCIATES INC

ROSS CHAPIN