

FURLONG BUTLER
ATTORNEYS

RECEIVED
CITY OF MOUNT VERNON

MAY 03 2017

C.E.D. DEPARTMENT
BY _____

BRADFORD E. FURLONG

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May 3, 2017

VIA HAND DELIVERY and EMAIL (rebeccab@mountvernonwa.gov)

Rebecca Lowell, CEDD, Senior Planner
Community & Economic Development Department
City of Mount Vernon
910 Cleveland Avenue
Mount Vernon, WA 98273-0809

VIA EMAIL (mvengineering@mountvernonwa.gov)

Esco Bell, Director
Public Works Department
City of Mount Vernon
1024 Cleveland Avenue
Mount Vernon, WA 98273-0809

Re: East Village Short Plat, PL16-150

Dear Ms. Lowell and Mr. Bell:

I have previously corresponded with you concerning the development of the East Village Short Plat and the appropriate mitigation measures to be included in a Mitigated Determination of Non Significance (MDNS). In a letter and materials submitted to you on January 31, 2017, we pointed out the severe impact that the proposed Plat would have on the Big Fir community in terms of noise, loss of privacy and, in particular, traffic safety impacts and the value of the homes purchased by the Big Fir residents in reliance on the Covenants imposing 55-year old age requirement for residents in the community. We submitted materials from a very experienced Skagit County Real Estate Broker, G. Walter Meagher, finding that increased vehicular traffic through the development would jeopardize the safety of and impose stress on the elderly residents living in Big Fir, that young children located in the proposed development and walking, running or playing through the Big Fir development would cause upset and that it is quite likely that Big Fir residents would find it difficult to find residents meeting the age requirement at the time they may wish to sell their homes.

Meanwhile, we also provided an extensive report from William Hager, Senior Planner at Maul Foster Alongi. As a Senior Planner of vast experience, Mr. Hager pointed out the severe traffic impacts on the Big Fir community from the proposed development.

I wish to again point out that at least thirteen percent (13%) of the residents of Big Fir North are between the ages of 90 and 96, forty-one percent (41%) are between 80 and 96-years of age and seventy-four percent (74%) are between the ages of 70 and 96 with seventeen percent (17%) between the ages of 55 and 69. These individuals and families moved into the area no doubt in reliance on the age restrictions with an expectation of safety, security, and relative privacy. The City of Mount Vernon, in reviewing the proposed Plat which the developer expects to use ingress and egress through the Big Fir community, has an obligation to these residents.

In an apparent response to these materials and in an attempt to demonstrate that the concerns of the Big Fir Community were misplaced, the City requested an appraisal to be performed by Wayland D. (Dan) Hewitt, a local appraiser and commissioned a response to comments from TSI. Mr. Hewitt's appraisal report is deficient in many respects¹ and, if anything, shows that the concerns of the Big Fir community residents are legitimate. The letter from TSI further confirms the incompatibility of the East Village Traffic with the Big Fir community.

A summary of the defects in the Hewitt appraisal are as follows:

1. Data. Licensed appraisers use comparison sales calculations along with looking at income potential and replacement value of to determine fair market value. Mr. Hewitt's "Consulting Report Summary" is not an appraisal and contains absolutely no data, no comparisons and is conclusory in its nature without citing any actual evidence whatsoever.
2. Inappropriate Plat Comparisons. The first Plat reviewed by Mr. Hewitt is Digby Heights. He comments that the construction of Digby Heights, phase 3 had no effect on the value for phases 1 and 2 (again without citing any data). The failure to provide data aside, what Mr. Hewitt fails to recognize is that Digby Heights does not include any age restrictions in its covenants. Therefore the comparison made has absolutely no application to the impacts of East Village on the Big Fir community.

Second, Mr. Hewitt looked at the Twin Brooks development. Mr. Hewitt notes that Phase 3 was the last developed and there has been no loss of value from phases 1 or 2 due to residents from Phase 3 driving through their neighborhood to gain access to East College Way and Highway 9. Mr. Hewitt's review of Twin Brooks sheds absolutely no light on the effect that East Village will have on Big Fir because the entirety of the Twin Brooks plat is over 55. Indeed, the approach taken by the developer to add additional phases to a community which is completely over 55 is

¹ The report also contains factual errors that further demonstrate its unreliability:

- Page 6, under "Assessment and Tax Information," the subject parcel number "**P27310**" mentioned is incorrect; the correct parcel number for the Kiesel property is "**P28003**." The related tax and valuation numbers are therefore incorrect.
- Page 11, under "Site Analysis," "East Village" the subject parcel size of "**20.67 acres**" is incorrect; the Kiesel property, **P28003**, is per the Assessor's records, **13.39 acres**.

exactly the approach that the City should take here: Require that East Village be limited to residents 55 years of age or older.

Lastly, Mr. Hewitt makes reference to the Highland Greens development. The developer in Highland Greens recorded covenants that designate Division V as senior housing. A review of the Plat map filed under Skagit County Auditor's File Number 200804070155 shows clearly that Division V is located on the East side of North 30th Street with no ingress or egress there provided to any of the other Divisions within the Highland Greens PUD. North 30th Street gives the elderly residents in Division V access to an arterial street. No resident of any of the Divisions of Highland Greens will use Division V for ingress or egress. There is no basis whatsoever to compare Division V of the Highland Greens PUD to Big Fir North and East Village.

The appraisal report provided by Mr. Hewitt provides absolutely no salient information that would discount the conclusions reached by Mr. Meagher or Mr. Hager. Indeed, by demonstrating that other senior housing in the Mount Vernon area does not serve as ingress and egress for leapfrogged general development, Mr. Hewitt's report actually illustrates a proper approach to planning and permitting for senior housing and adjacent general population housing.

The letter from Transportation Solutions, Inc. (TSI) is equally suspect and, like the report of Mr. Hewitt, demonstrates that a restriction on the age of residents in the East Village subdivision is appropriate.²

First, it is particularly notable that TSI finds that the comfortable travel speed through the very tight streets of Big Fir is 15-17 miles per hour. In other words, it's a tight space, has numerous residential entrances and many sharp curves, not to mention elderly drivers. It is almost beyond belief that any responsible traffic engineer would expect new, teenaged drivers or young parents wishing to get their children to school and get themselves to work on time would respect the "comfortable" speeds that are required for safe navigation through the Big Fir community. Further, to assume that it is appropriate to locate a general population to the East with access only through narrow streets in an elderly residential community is patently irresponsible. It is frankly astounding that the traffic engineer is unconcerned with the mixture of young drivers and older drivers. He appropriately notes that these two age groups (16-19 and over 80 years) old have a high incidents of traffic fatalities and accidents. Therefore, he concludes that mixing them is appropriate. Any person with an ounce of common sense would understand that the problems associated with the young drivers is the excessive speed at which they drive. To mix these high speed drivers who are prone to accidents and with elderly drivers who tend to drive slower and may lack the requisite attention and response time of younger drivers is a recipe for disaster.

In short, it is obvious that the City's attempt to "rebut" (Ms. Lowell's word) the information provided by the Big Fir experts only serves to illustrate further why the requested limitation to 55 and older residents in the East Village plat is a necessary SEPA mitigation measure.

The putative estimates for ingress and egress directly to Blackburn provided by the developer contain almost no substantiation. Whether these numbers are accurate or not, they demonstrate

² The letter is not a "Traffic Engineering Study" and is not stamped by an engineer, undermining its value.

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one thing: the site chosen for this development is very poor. One option under SEPA review is “no build,” which likely is the most appropriate and responsible determination for the Mount Vernon Planning Department to make given its SEPA review. At a minimum, it demonstrates that if the use of the Big Fir community for ingress and egress is the only viable option, protecting the Big Fir community by imposing mitigation on the project to house only citizens 55 years of age or older, such as in the Big Fir community, is really the only viable option. The conclusion is inescapable and within the City’s authority under SEPA and the Mount Vernon code for approval of subdivisions.

Finally, imposing this mitigation measure is consistent with the developer’s expectations. He writes that older individuals are appropriate buyers for the homes he plans. Therefore, it is difficult to understand why the City would not take the step to make sure that is exactly the type of resident that lives in that type of community, *i.e.*, over 55 years of age, and no others. To do so will meet the legitimate development expectations of the developer and carry out the City’s duty to appropriately condition this project to assure the welfare and safety of its citizens.

I appreciate your attention to my remarks.

FURLONG ♦ BUTLER
ATTORNEYS

Sincerely,



BRADFORD E. FURLONG, WSBA #12924

BEF/smh

cc: Big Fir Homeowners Association

HERRIGSTAD ENGINEERING PS

Civil Engineering & Surveying

4320 Whistle Lake Road
Anacortes, WA 98221

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RECEIVED
CITY OF MOUNT VERNON

DEC 29 2016
C.E.D. DEPARTMENT
BY _____

16-150

EAST VILLAGE
2437 BLACKBURN ROAD
DRAINAGE ANALYSIS

December 22, 2016

Job # 2015-121

Prepared By:
Dale K. Herrigstad P.E.



Client/Owner:
Samish Bay Land Company

Mount Vernon, WA 98273

The stormwater plan will be based on the requirements of the 2005 DOE Stormwater Management Manual for Western Washington, as required by the City of Anacortes Drainage Ordinance.

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PROJECT DESCRIPTION:

The project is to develop 2.03 acres of a 13.42 acre parcel. The 2.03 acres is hydraulically isolated from the remaining 11.39 acres by being located uphill and mostly north of Maddox creek that bisects the property. The 150 foot buffer for Maddox Creek further isolates the developed portion of the parcel and becomes the dividing line between the 2.03 developed acres and the remaining property. The southern 11.39 acres has two existing dwelling units and a 2.1 acres wetland and associated 75 foot buffer in addition to Maddox Creek and its 150 foot buffer. The northern 2.03 acre developed area will be divided into 7 lots and a water quality/detention Tract. A 21 foot wide road and 4 foot sidewalk will access the site. The site is accessed through Big Fir North at the east end of Balsam Lane. The site slopes from the northeast to the southwest. The eastern offsite uphill portion of the site is a development that diverts its water away from this site. The northern property is mostly undeveloped but drainage also appears to divert around this site. This analysis will be limited to the 2.03 acres. The 2.03 acres will be mostly cleared. **See Attachment A.**

EXISTING CONDITIONS:

The existing 2.03 acre site is forested. Slopes from northeast to southwest at 3%. **See attachment B.**

DOE Stormwater Management Manual Minimum requirements:

According to the 2005 DOE manual figure 2.2, page 2-9:

- Does the site have 35% or more of existing impervious coverage – No
- Does the site add 5000 square feet of new impervious surfaces – Yes
- Does the site $\frac{3}{4}$ acres or more of native vegetation to lawn – Yes
- Does the project have 2,000 square feet of new impervious surfaces – Yes

All Minimum requirements apply to this project. This report will work through each of the 10 requirements below.

Minimum Requirement #1: Prepare a Stormwater Site Plan.

Volume 1, Chapter 3 steps (page 3-1).

Step 1. Collect and Analyze Information on Existing Conditions.

The current site is forested with little offsite properties draining onto this site.

2. Prepare a Preliminary Development Layout.

A proposed layout is attached as **attachment A**.

3. Perform an offsite analysis:

No offsite water flows onto this site.

4. Determine and Read Applicable Minimum Requirements.

The applicable minimum requirements 1 through 10 are applicable to this project.

5. Prepare a Permanent Stormwater Control Plan

Referring to Chapter 4 and determine threshold discharge areas and applicable requirements for treatment and flow control.

First, determine the amount of effective Pollution-generating impervious surfaces (PGIS) and Pollution-generating pervious surface (PGPS) to determine treatment requirements.

Threshold Discharge areas:

New PGIS road and driveway area = 0.40 acres.

PGIS = 17,578 SF > 5000 SF

PGPS = 0.40 acres < $\frac{3}{4}$ acres

From table 2.1, section 2.5.6, page 2-27; Minimum treatment #6: Runoff treatment

Treatment facilities are required and on site Stormwater BMPs are required.

Second, determine the amount of effective impervious surfaces and converted pervious surfaces.

Threshold Discharge areas table 2.2 Flow Control Requirements by Threshold Discharge Area:

Total impervious area = 34,203 sf (0.79 acres) > 10,000 SF

Storm water detention is required.

Step 6. Prepare a Construction Stormwater Pollution Prevention Plan. See minimum requirement #2 below for SWPP.

Step 7. Complete a Stormwater Site Plan: The project overview has been provided at the beginning of this report along with an existing conditions description. Maps are included in the attachments. Soil maps are provided in the attachments. Offsite analysis is provided in section step 3 above.

Step 8. Check compliance with all applicable minimum requirements: To take place during and after construction.

Minimum Requirement #2: Construction Stormwater Pollution Prevention (SWPP)

This project must meet the 12 elements of a SWPP because the site exceeds the threshold of 2,000 square feet of new impervious surfacing.

1. Mark Clearing limits: An existing fence delineates the western and eastern boundary. An orange construction fence will be installed along the northern property line and southern 150' Maddox Creek setback boundary.
2. Establish Construction Access: The construction entrance will be established at the only access point at the end of Balsam Lane.
3. Control Flow Rates: The detention pond in Tract A will be constructed to control offsite flow rates.
4. Install Sediment controls: The detention pond will be constructed as a first step in construction and act as a sediment trap during construction.
5. Stabilized Soils: Plastic covering or mulching with straw will be the most economical means to protect against erosion during construction. Exposed soils will be landscaped as final grades are accomplished. Clearing will be limited to the area for the detention pond and the road and utilities are approximately 32,000 square feet or 0.75 acres. The lots will be cleared as building permits are procured.
6. Protect Slopes: There are no steep slopes on this project. Maximum slope is 3%.
7. Protect Drain Inlets: New catch basins will be equipped with filter traps until the site is paved and stabilized. Offsite catch basins filter traps will be installed along Balsam Lane.
8. Stabilize Channels and Outlets: Onsite exposed soils will be stabilized as stipulated in construction notes.
9. Control Pollutants: Applicable notes are included on construction drawing.
10. Control De-Watering: De-watering of excavation trenches will be pumped to the temporary sedimentation pond.
11. Maintain BMPs: Applicable notes are included on construction drawing.
12. Manage the Project: Applicable notes are included on construction drawing.

Minimum Requirement #3: Source Control of Pollution

The site is flat and minimal erosion will occur. The detention pond will act as the sedimentation pond and require additional excavation prior to final stabilization of the site.

Minimum Requirement #4: Preservation of Natural Drainage Systems and Outfalls

Maddox Creek naturally receives all surface flow from this site. The discharge for the pond will be to Maddox Creek to match predevelopment flow patterns.

Minimum Requirement #5: On-site Stormwater Management

The site soils for this project are poorly draining hydrologic group D. All impervious areas will be directed to the detention/wetpool pond in Tract A.

Minimum Requirement #6: Runoff Treatment

Treatment will be provided with a wetpool combined with the detention pond.

Minimum Requirement #7: Flow Control

Flow control will be provided with the use of a detention pond combined with a wetpool. See the attached WWHM report below.

Minimum Requirement #8: Wetland Protection

The drainage from this pond will discharge through a dispersion pipe upslope of Maddox Creek allowing distributed flow to Maddox Creek and to the isolated wetlands between the site and Maddox Creek.

Minimum Requirement #9: Basin/Watershed Planning

All discharge will be limited to the pre-developed flow to Maddox Creek.

Minimum Requirement #10: Operation and Maintenance

See the operation and maintenance schedules attached.

FLOW VOLUMES

Flow volume are determined using the Western Washington Hydrograph Modal WWHM3. Soils for the 2.03 acres are classified as Skipopa silt loam, hydrologic group D.

The following areas were used for the pond design.

Road area = 13,073 square feet (0.30 acres)

Driveways = 4,500 square feet (0.10 acres)

Roofs 7 x 2000 = 14,000 square feet (0.32 acres)

Sidewalks and patios/decks = 2,630 square feet (0.07 acres)

Total impervious area = 0.79 acres

Total pervious area = 1.24 acres of grass lawn

Name : Trapezoidal Pond 1
 Bottom Length: 50ft.
 Bottom Width: 26.25ft.
 Depth : 5ft.
 Volume at riser head : 0.2269ft.
 Side slope 1: 3 To 1
 Side slope 2: 3 To 1
 Side slope 3: 3 To 1
 Side slope 4: 3 To 1
Discharge Structure
 Riser Height: 4 ft.
 Riser Diameter: 18 in.
 NotchType : Rectangular
 Notch Width : 0.062 ft.
 Notch Height: 0.835 ft.
 Orifice 1 Diameter: 0.753 in. Elevation: 0 ft.

Element Flows To:
 Outlet 1 Outlet 2

Pond Hydraulic Table				
Stage(ft)	Area(acr)	Volume(acr-ft)	Dschrg(cfs)	Infilt(cfs)
0.000	0.030	0.000	0.000	0.000
0.056	0.031	0.002	0.004	0.000
0.111	0.031	0.003	0.005	0.000
0.167	0.032	0.005	0.006	0.000
0.222	0.033	0.007	0.007	0.000
0.278	0.033	0.009	0.008	0.000
0.333	0.034	0.011	0.009	0.000
0.389	0.034	0.013	0.009	0.000
0.444	0.035	0.014	0.010	0.000
0.500	0.036	0.016	0.011	0.000
0.556	0.036	0.018	0.011	0.000
0.611	0.037	0.020	0.012	0.000
0.667	0.038	0.023	0.012	0.000
0.722	0.038	0.025	0.013	0.000
0.778	0.039	0.027	0.013	0.000
0.833	0.039	0.029	0.014	0.000
0.889	0.040	0.031	0.014	0.000
0.944	0.041	0.033	0.014	0.000
1.000	0.041	0.036	0.015	0.000
1.056	0.042	0.038	0.015	0.000
1.111	0.043	0.040	0.016	0.000
1.167	0.044	0.043	0.016	0.000
1.222	0.044	0.045	0.016	0.000
1.278	0.045	0.048	0.017	0.000
1.333	0.046	0.050	0.017	0.000
1.389	0.046	0.053	0.018	0.000
1.444	0.047	0.055	0.018	0.000
1.500	0.048	0.058	0.018	0.000
1.556	0.048	0.061	0.019	0.000
1.611	0.049	0.063	0.019	0.000
1.667	0.050	0.066	0.019	0.000
1.722	0.051	0.069	0.020	0.000
1.778	0.051	0.072	0.020	0.000
1.833	0.052	0.075	0.020	0.000
1.889	0.053	0.078	0.020	0.000

1.944	0.054	0.080	0.021	0.000
2.000	0.054	0.083	0.021	0.000
2.056	0.055	0.087	0.021	0.000
2.111	0.056	0.090	0.022	0.000
2.167	0.057	0.093	0.022	0.000
2.222	0.058	0.096	0.022	0.000
2.278	0.058	0.099	0.022	0.000
2.333	0.059	0.102	0.023	0.000
2.389	0.060	0.106	0.023	0.000
2.444	0.061	0.109	0.023	0.000
2.500	0.062	0.112	0.024	0.000
2.556	0.062	0.116	0.024	0.000
2.611	0.063	0.119	0.024	0.000
2.667	0.064	0.123	0.024	0.000
2.722	0.065	0.126	0.025	0.000
2.778	0.066	0.130	0.025	0.000
2.833	0.067	0.134	0.025	0.000
2.889	0.067	0.138	0.025	0.000
2.944	0.068	0.141	0.026	0.000
3.000	0.069	0.145	0.026	0.000
3.056	0.070	0.149	0.026	0.000
3.111	0.071	0.153	0.026	0.000
3.167	0.072	0.157	0.027	0.000
3.222	0.073	0.161	0.030	0.000
3.278	0.073	0.165	0.035	0.000
3.333	0.074	0.169	0.041	0.000
3.389	0.075	0.173	0.049	0.000
3.444	0.076	0.177	0.057	0.000
3.500	0.077	0.182	0.066	0.000
3.556	0.078	0.186	0.075	0.000
3.611	0.079	0.190	0.085	0.000
3.667	0.080	0.195	0.095	0.000
3.722	0.081	0.199	0.106	0.000
3.778	0.082	0.204	0.117	0.000
3.833	0.083	0.208	0.128	0.000
3.889	0.083	0.213	0.139	0.000
3.944	0.084	0.217	0.151	0.000
4.000	0.085	0.222	0.162	0.000
4.056	0.086	0.227	0.354	0.000
4.111	0.087	0.232	0.704	0.000
4.167	0.088	0.237	1.157	0.000
4.222	0.089	0.242	1.693	0.000
4.278	0.090	0.247	2.302	0.000
4.333	0.091	0.252	2.975	0.000
4.389	0.092	0.257	3.706	0.000
4.444	0.093	0.262	4.492	0.000
4.500	0.094	0.267	5.329	0.000
4.556	0.095	0.272	6.213	0.000
4.611	0.096	0.278	7.143	0.000
4.667	0.097	0.283	8.116	0.000
4.722	0.098	0.288	9.131	0.000
4.778	0.099	0.294	10.19	0.000
4.833	0.100	0.299	11.28	0.000
4.889	0.101	0.305	12.41	0.000
4.944	0.102	0.311	13.57	0.000
5.000	0.103	0.316	14.77	0.000
5.056	0.104	0.322	16.01	0.000

MITIGATED LAND USE

ANALYSIS RESULTS

Flow Frequency Return Periods for Predeveloped. POC #1

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.053317
5 year	0.14956
10 year	0.223102
25 year	0.311781
50 year	0.370117
100 year	0.420554

Flow Frequency Return Periods for Mitigated. POC #1

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.030373
5 year	0.06378
10 year	0.100306
25 year	0.171147
50 year	0.248804
100 year	0.355329

Yearly Peaks for Predeveloped and Mitigated. POC #1

<u>Year</u>	<u>Predeveloped</u>	<u>Mitigated</u>
1950	0.178	0.220
1951	0.109	0.099
1952	0.072	0.055
1953	0.023	0.026
1954	0.001	0.022
1955	0.034	0.021
1956	0.111	0.023
1957	0.057	0.023
1958	0.124	0.026
1959	0.021	0.018
1960	0.123	0.094
1961	0.118	0.026
1962	0.040	0.022
1963	0.001	0.023
1964	0.015	0.019
1965	0.128	0.022
1966	0.160	0.103
1967	0.039	0.020
1968	0.099	0.022
1969	0.045	0.042
1970	0.053	0.019
1971	0.012	0.018
1972	0.200	0.109
1973	0.162	0.023
1974	0.065	0.023
1975	0.098	0.070
1976	0.647	0.812
1977	0.023	0.023

1978	0.020	0.019
1979	0.013	0.025
1980	0.040	0.021
1981	0.017	0.037
1982	0.061	0.020
1983	0.161	0.130
1984	0.001	0.023
1985	0.032	0.066
1986	0.021	0.019
1987	0.052	0.029
1988	0.026	0.026
1989	0.045	0.023
1990	0.014	0.022
1991	0.160	0.070
1992	0.195	0.206
1993	0.079	0.022
1994	0.073	0.022
1995	0.016	0.017
1996	0.000	0.018
1997	0.003	0.020
1998	0.443	0.053
1999	0.162	0.023
2000	0.031	0.022

Ranked Yearly Peaks for Predeveloped and Mitigated. POC #1

Rank	Predeveloped	Mitigated
1	0.6466	0.8120
2	0.4428	0.2202
3	0.1997	0.2064
4	0.1948	0.1302
5	0.1777	0.1089
6	0.1624	0.1034
7	0.1619	0.0993
8	0.1614	0.0939
9	0.1601	0.0702
10	0.1596	0.0698
11	0.1275	0.0656
12	0.1237	0.0554
13	0.1230	0.0530
14	0.1177	0.0420
15	0.1113	0.0367
16	0.1091	0.0290
17	0.0993	0.0263
18	0.0985	0.0259
19	0.0794	0.0258
20	0.0734	0.0256
21	0.0719	0.0249
22	0.0649	0.0233
23	0.0610	0.0232
24	0.0572	0.0230
25	0.0530	0.0230
26	0.0518	0.0230
27	0.0451	0.0226
28	0.0450	0.0226
29	0.0403	0.0226
30	0.0400	0.0225

31	0.0385	0.0225
32	0.0339	0.0221
33	0.0324	0.0220
34	0.0310	0.0220
35	0.0259	0.0219
36	0.0235	0.0219
37	0.0234	0.0216
38	0.0214	0.0216
39	0.0210	0.0211
40	0.0205	0.0205
41	0.0166	0.0200
42	0.0156	0.0198
43	0.0155	0.0198
44	0.0144	0.0193
45	0.0127	0.0189
46	0.0116	0.0188
47	0.0033	0.0185
48	0.0012	0.0184
49	0.0011	0.0183
50	0.0006	0.0181
51	0.0004	0.0171

POC #1

The Facility PASSED

The Facility PASSED.

Flow(CFS)	Predev	Dev	Percentage	Pass/Fail
0.0267	780	704	90	Pass
0.0301	663	451	68	Pass
0.0336	592	400	67	Pass
0.0371	526	346	65	Pass
0.0405	482	312	64	Pass
0.0440	436	270	61	Pass
0.0475	405	253	62	Pass
0.0509	377	225	59	Pass
0.0544	344	196	56	Pass
0.0579	317	178	56	Pass
0.0614	283	159	56	Pass
0.0648	263	144	54	Pass
0.0683	235	126	53	Pass
0.0718	222	118	53	Pass
0.0752	198	113	57	Pass
0.0787	187	101	54	Pass
0.0822	170	94	55	Pass
0.0856	160	86	53	Pass
0.0891	145	76	52	Pass
0.0926	132	68	51	Pass
0.0960	123	62	50	Pass
0.0995	111	55	49	Pass
0.1030	99	51	51	Pass
0.1065	84	45	53	Pass
0.1099	75	42	56	Pass
0.1134	70	37	52	Pass
0.1169	64	36	56	Pass
0.1203	53	35	66	Pass

0.1238	52	34	65	Pass
0.1273	46	32	69	Pass
0.1307	39	32	82	Pass
0.1342	36	28	77	Pass
0.1377	33	28	84	Pass
0.1411	32	27	84	Pass
0.1446	31	26	83	Pass
0.1481	29	25	86	Pass
0.1516	29	24	82	Pass
0.1550	28	24	85	Pass
0.1585	27	23	85	Pass
0.1620	24	21	87	Pass
0.1654	20	21	104	Pass
0.1689	19	20	105	Pass
0.1724	19	17	89	Pass
0.1758	18	17	94	Pass
0.1793	17	16	94	Pass
0.1828	17	16	94	Pass
0.1862	16	15	93	Pass
0.1897	16	14	87	Pass
0.1932	16	14	87	Pass
0.1967	15	14	93	Pass
0.2001	13	13	100	Pass
0.2036	13	13	100	Pass
0.2071	13	12	92	Pass
0.2105	13	11	84	Pass
0.2140	13	11	84	Pass
0.2175	13	11	84	Pass
0.2209	13	10	76	Pass
0.2244	13	9	69	Pass
0.2279	13	9	69	Pass
0.2313	12	9	75	Pass
0.2348	12	9	75	Pass
0.2383	12	9	75	Pass
0.2418	12	9	75	Pass
0.2452	12	9	75	Pass
0.2487	12	9	75	Pass
0.2522	12	8	66	Pass
0.2556	12	8	66	Pass
0.2591	12	8	66	Pass
0.2626	12	8	66	Pass
0.2660	12	8	66	Pass
0.2695	12	8	66	Pass
0.2730	12	8	66	Pass
0.2764	11	8	72	Pass
0.2799	11	8	72	Pass
0.2834	11	8	72	Pass
0.2869	11	8	72	Pass
0.2903	10	8	80	Pass
0.2938	10	8	80	Pass
0.2973	10	8	80	Pass
0.3007	10	8	80	Pass
0.3042	10	7	70	Pass
0.3077	10	7	70	Pass
0.3111	10	7	70	Pass
0.3146	10	7	70	Pass
0.3181	10	7	70	Pass

0.3215	10	7	70	Pass
0.3250	10	7	70	Pass
0.3285	10	7	70	Pass
0.3320	10	7	70	Pass
0.3354	9	7	77	Pass
0.3389	9	7	77	Pass
0.3424	9	7	77	Pass
0.3458	9	7	77	Pass
0.3493	9	7	77	Pass
0.3528	9	7	77	Pass
0.3562	8	7	87	Pass
0.3597	8	7	87	Pass
0.3632	8	7	87	Pass
0.3666	8	7	87	Pass
0.3701	8	7	87	Pass

Water Quality BMP Flow and Volume for POC 1.
 On-line facility volume: 0.0414 acre-feet
 On-line facility target flow: 0.01 cfs.
 Adjusted for 15 min: 0.0238 cfs.
 Off-line facility target flow: 0.0134 cfs.
 Adjusted for 15 min: 0.0151 cfs.

PerlnD and Implnd Changes

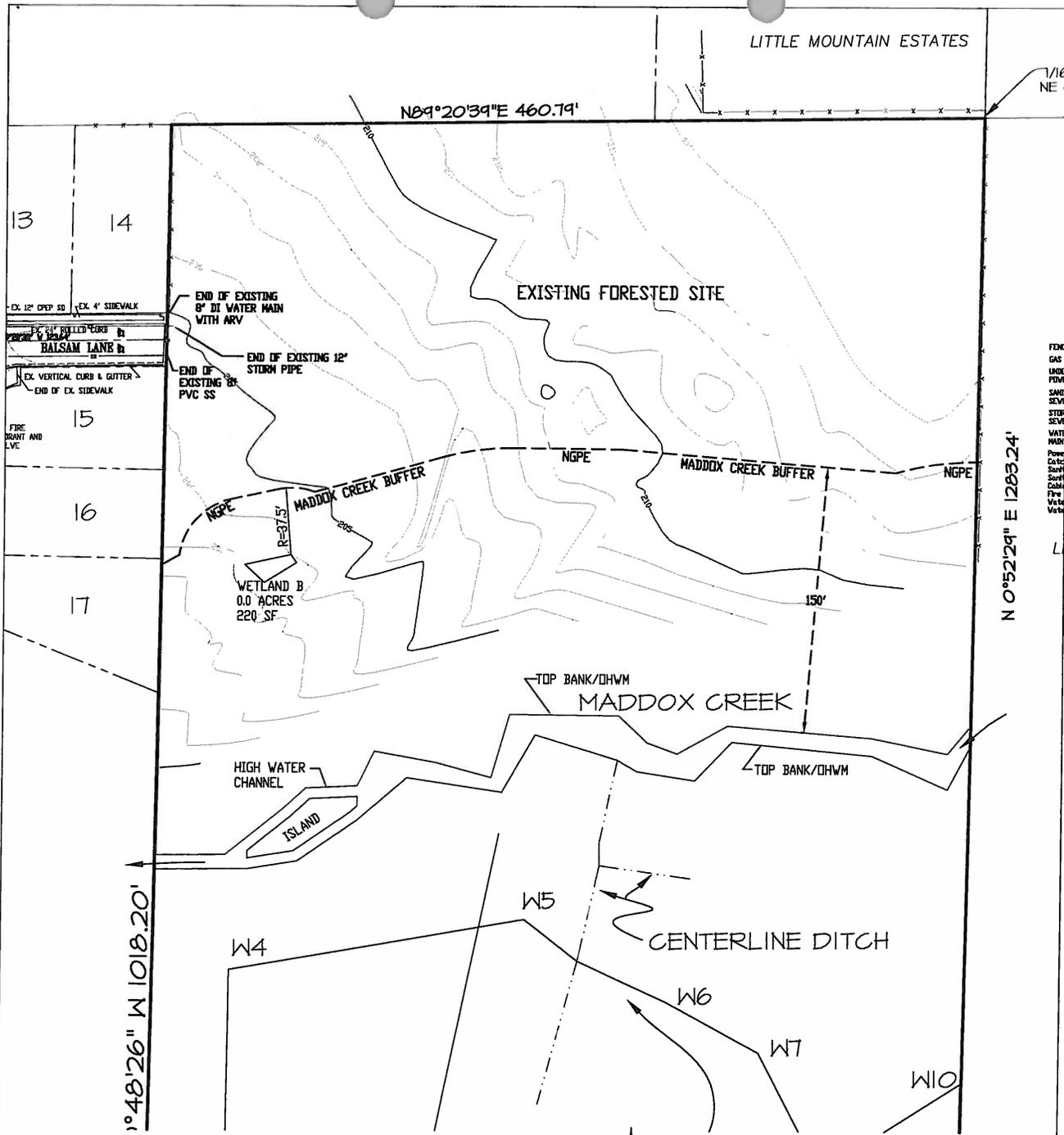
No changes have been made.

WATER QUALITY TREATMENT DESIGN

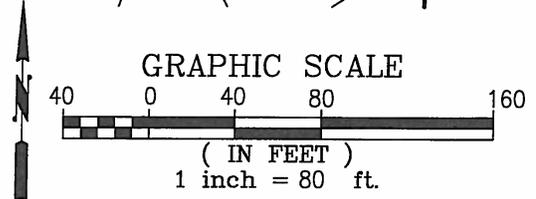
Water quality will be provided for with a wet pool located below the detention pond. The volume of the wet pool will be equal to the water quality storm event of 0.0414 acre-feet = 1,803 cubic feet. The bottom pond area is a minimum of 1,313 square feet so the pond depth is a minimum of 1.4' with an additional 6" for sediment storage the pond bottom will be 2 feet below the detention pond.

CONCLUSION:

The detention pond will be designed with a minimum bottom area of 1,313 square feet and 3:1 side slopes for a depth of 5 feet from the outlet. An additional 2 feet below the outlet will be used for a water quality wet pool and sediment storage.

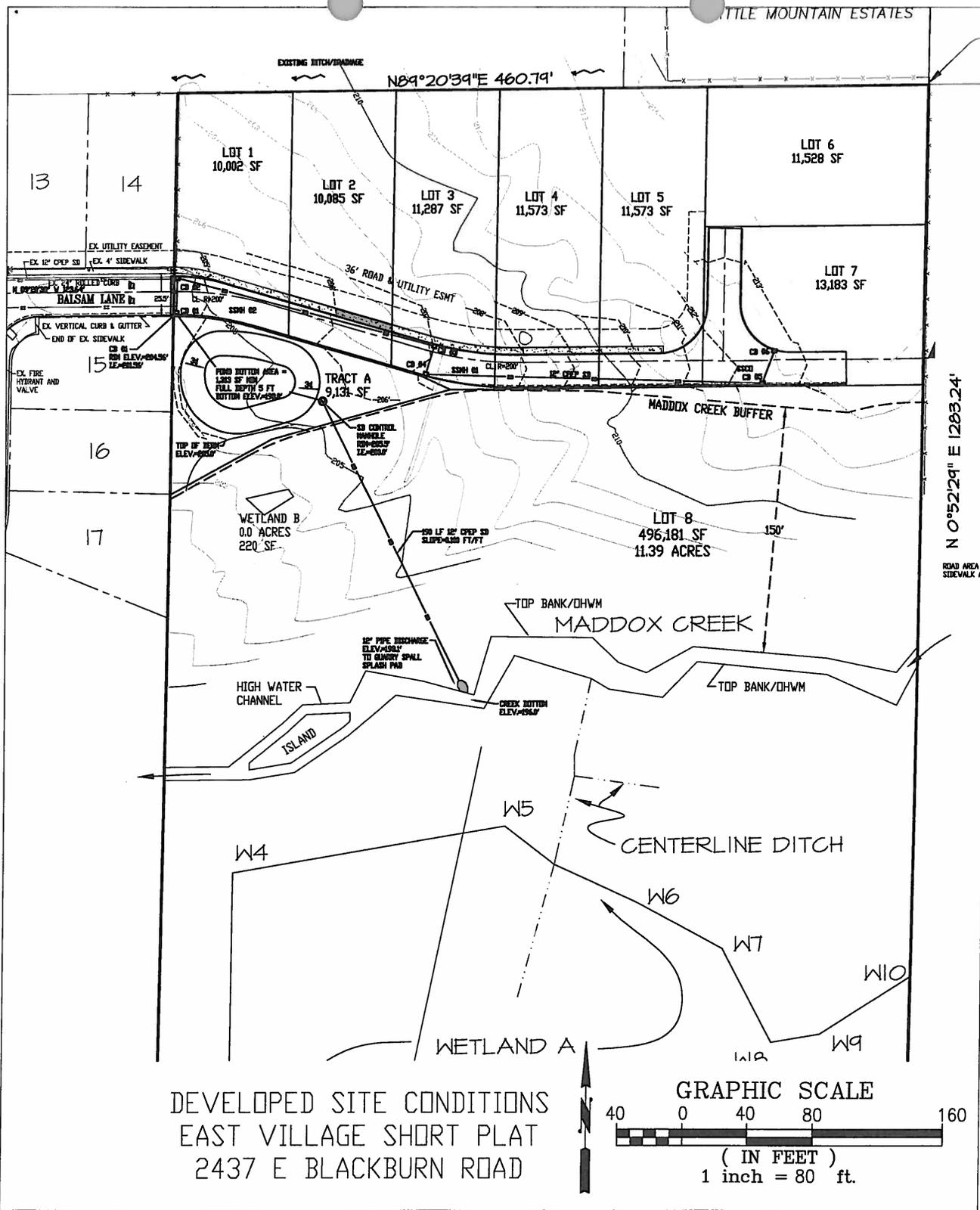


EXISTING SITE CONDITIONS
 EAST VILLAGE SHORT PLAT
 2437 E BLACKBURN ROAD



HERRIGSTAD ENGINEERING & SURVEYING
 4320 WHISTLE LAKE ROAD
 ANACORTES, WA 98221 299-8804

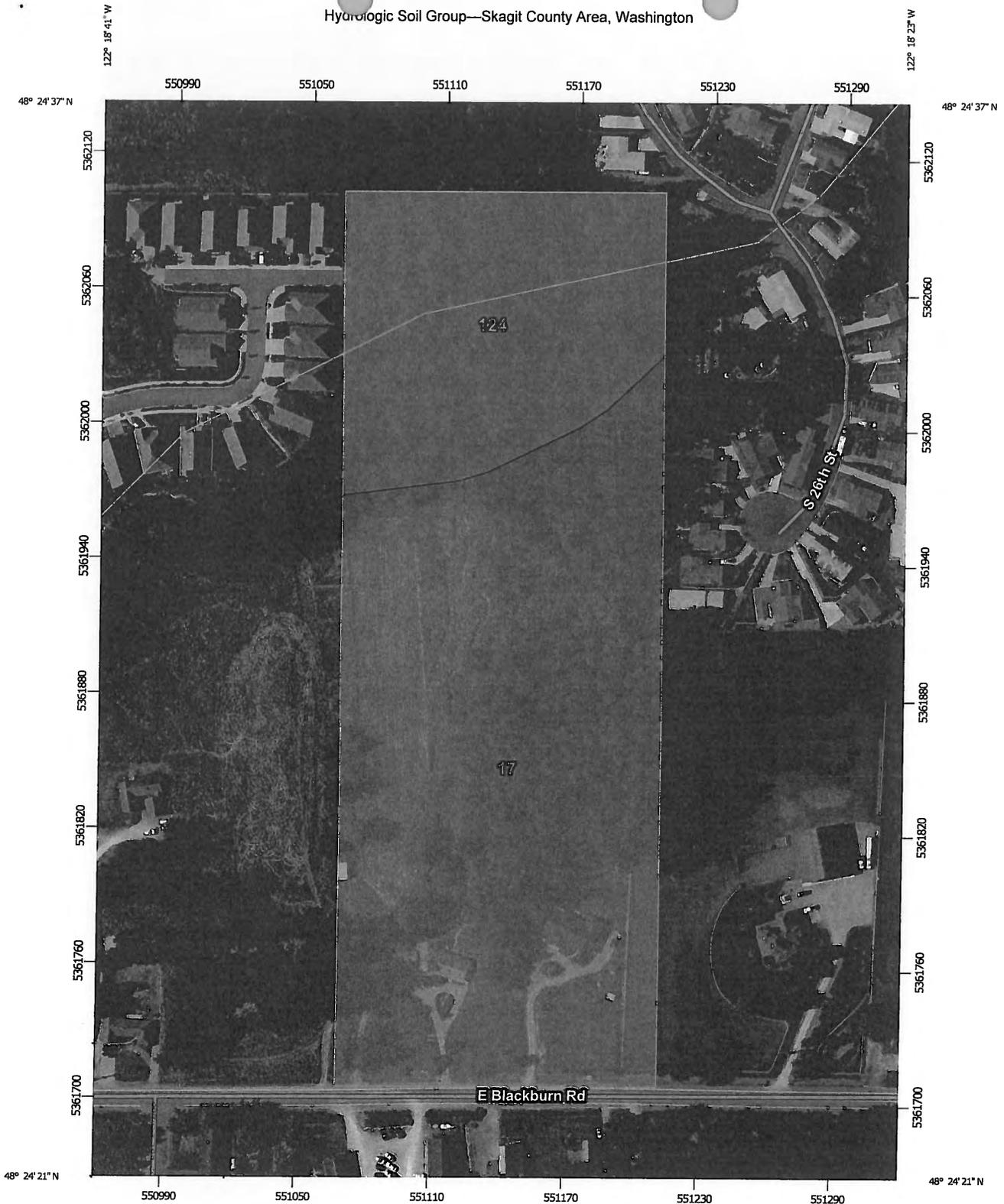
ATTACHMENT A



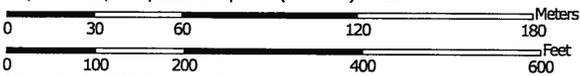
HERRIGSTAD ENGINEERING & SURVEYING
4320 WHISTLE LAKE ROAD
ANACORTES, WA 98221 299-8804

ATTACHMENT B

Hydrologic Soil Group—Skagit County Area, Washington



Map Scale: 1:2,330 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84



Natural Resources Conservation Service

Web Soil Survey National Cooperative Soil Survey

ATTACHMENT C

1 OF 2

3/20/2016

Page 1 of 4

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Skagit County Area, Washington (WA657)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
17	Bow gravelly loam, 3 to 8 percent slopes	C/D	10.1	71.0%
124	Skipopa silt loam, 0 to 3 percent slopes	D	4.1	29.0%
Totals for Area of Interest			14.2	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Critical Area site Assessment (Parcel 28003): East Village Short Plat

Prepared for:

Dave Prutzman
Samish Bay Real Estate Group
4703 Parkview Lane
Mount Vernon, WA 98274



Prepared by:

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CITY OF MOUNT VERNON
DEC 29 2016
C.E.D. DEPARTMENT
BY _____



Graham-Bunting Associates
Environmental & Land Use Services
3643 Legg Road, Bow, WA 98232
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16-150

December 21, 2016

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Summary

Client: Dave Prutzman
4703 Parkview Lane
Mount Vernon, WA 98274

Site: 13.4 acre site (Parcel 28003) located in south Mount Vernon, North of East Blackburn Road within the Northwest ¼ of Section 28, Township 34 N., Range 4 E., W.M., Skagit County, Washington.

Project: The subject proposal is to subdivide Parcel 28003 into 8 lots through the short subdivision process.

Areas Assessed: Wetland A - Category III 2.1 acre depressional, wetland
Wetland B – Category IV 220 sf depressional, wetland
Wetland C – Category III 10,101 sf depressional wetland
Maddox Creek - Type F (Fish Habitat) water

Regulatory Guidance: MVMC 15.40 establishes the standard buffers for:
Category III wetlands - 75 feet
Category IV wetlands – 50 feet
Type F (fish habitat) waters – 150 feet

Proposed Mitigation: Wetland A – Standard Category III wetland buffer of 75 feet will be applied to avoid project impacts

Wetland B – Buffer averaging plan is proposed to minimize impacts to category IV wetland. Buffer will be reduced to 37.5 feet and increased by 12.5 feet along the forested portion of the buffer of Wetland A.

Wetland C – Wetland C will be filled in conjunction with residential development and unavoidable impacts will be minimized through the purchase of mitigation credits at an authorized wetland mitigation bank.

Maddox Creek – Standard Type F stream buffer of 150 feet will be applied to avoid project impacts.

Critical areas and buffers will be designated as a native growth protection area (NGPA). Designation of the NGPA will occur through conservation easement, protective easement or tract and deed restriction. The NGPA may require permanent fencing at the discretion of the Director. Signage posted at 150 foot intervals will be placed along the common boundary between the NGPA and the abutting land.

Blackburn Road. The northern three quarters of the parcel is undeveloped and consists of open pasture and mixed forest. Maddox Creek flows from east to west through the forested northern portion of the parcel. The northern portion of the site is contiguous to the Big Fir North residential development. An interior road associated with the development (Balsam Lane), dead ends at the northwestern property boundary. The parcel is relatively flat with an average grade of approximately 3% and drains north and south to roadway ditches and to Maddox Creek.

An open pasture is the primary feature of the central and western portion of the site. The pasture drains to Maddox Creek through a shallow ditch or swale located centrally on the parcel. The pasture is vegetated with mixed grasses consisting of sweet vernal grass (*Anthoxanthum odoratum*), velvet grass (*Holcus lanatus*), colonial bentgrass (*Agrostis tenuis*), reed canarygrass (*Phalaris arundinacea*). Creeping buttercup (*Ranunculus repens*) and soft rush (*Juncus effusus*) are also located throughout the pasture. Trailing blackberry (*Rubus ursinus*) and Himalayan blackberry (*Rubus discolor*) are present at a number of locations around the northern and eastern perimeters of the pasture at the transition to forest.

A mixed forest dominated by conifers occupies the eastern and northern portions of the parcel. Douglas fir (*Pseudotsuga menziesii*), western red cedar (*Thuja plicata*) and red alder (*Alnus rubra*) make up the forest canopy, Conifers range from 6 inches to 30 inches dbh. The understory consists primarily of elderberry (*Sambucus racemosa*), vine maple (*Acer circinatum*), sword fern (*Polystichum munitum*), lady fern (*Athyrium filix-femina*), Indian plum (*Oemleria cerasiformis*) and trailing blackberry. Skunk cabbage (*Lysichiton americanum*) is present at several locations within the banks of Maddox Creek and at locations in Wetland C.

Maddox Creek is classified as F (Fish Habitat) in accordance with WAC 222-16-031 and as a high gradient (> or equal to 2%) stream on the City of Mount Vernon Stream Gradient Map. The creek has a well defined (incised) channel and a diverse riparian plant community consisting of the species listed in the previous paragraph. The creek varies in width from 3 to 12 feet and includes several distinct associated wetlands within its banks. The OHWM is located along the top of bank at the transition from wetland to upland vegetation communities dominated by sword fern and conifers.

3. Project Description

The subject proposal is to subdivide Parcel 28003 into 8 lots. The new residential lots (1 through 7) will be located along the northern property boundary extending from the western to the eastern property boundary. Lots 1 through 7 will range from 10,000 square feet to 13,183 square feet in area. The lots will be accessed via a private road extending from the terminus of Balsam Lane east to a hammer head turnaround at Lot 7. A stormwater pond will be located contiguous to and south of the access from Balsam Lane in Tract A. Lot 8 will include the existing homesites along East Blackburn Road. Maddox Creek and wetlands will be protected as a Native Growth Protection Area (NGPA) and included in Lot 8. The subdivision will result in new development of 2.03 acres of the 13.4 acre site.

4. Existing Information Review

The subject property has been addressed under a number of existing studies. These information sources have been reviewed and synthesized to assist GBA in characterizing the subject property. The sources are summarized as follow:

4.1 National Wetland Inventory

The National Wetland Inventory (NWI) is compiled by the U.S. Department of Interior's Fish and Wildlife Service. NWI relies upon visual aerial photo interpretation of wetland indicators

including hydrologic, vegetation and topographic signatures. Wetland areas identified under NWI are also classified in accordance with the Cowardin classification system. NWI identifies a system of connected wetlands in the vicinity of the subject property. Within the property boundaries, a linear wetland is identified bisecting the northern portion of the site. The wetland is classified as a Riverine, Upper Perennial, Unconsolidated Bottom, Permanently Flooded (R3UBH) wetland. The mapped location, alignment and classification are generally consistent with the location of Maddox Creek. GBA utilize NWI only as a generalized map indication of the possible presence and extent of wetlands. Jurisdictional delineations are always based on a site-specific analysis.

4.2 Soil Survey of Skagit County Area, Washington

The Soil Survey is compiled by the Natural Resource Conservation Service and includes mapped soil units registered to detailed descriptions of soil characteristics. The survey maps two soil units within the property boundaries:

#17 Bow gravelly loam (3-8 percent slopes) is a very deep, somewhat poorly drained soil frequently found on glaciated terraces and undulating till plains. Permeability of the Bow soil is slow and available water capacity is high. The Bow soil is mapped over the southern portion of the site. The bow soil is included on the local hydric soil list under criteria 2 a):

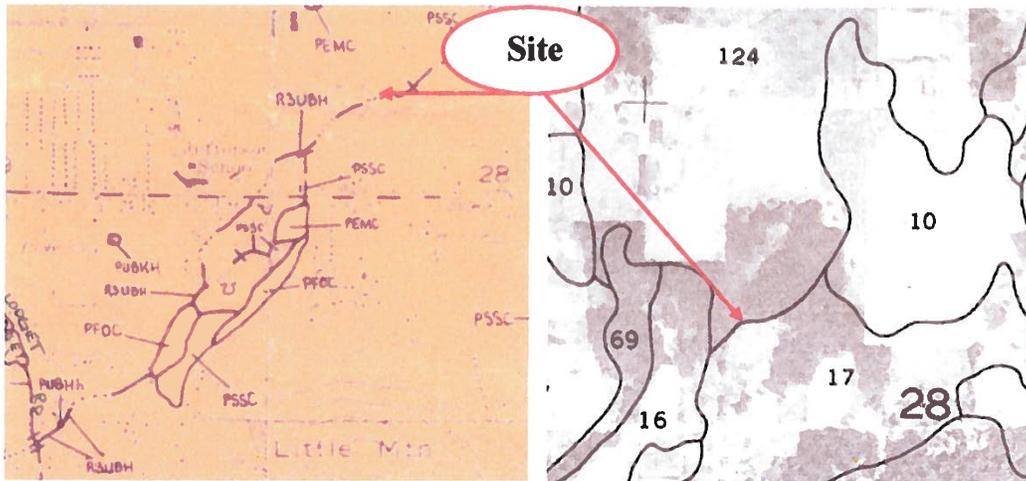
2. – Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Aquisalids, Pachic subgroups, or Cumulic subgroups that are:

- a) Somewhat poorly drained with a water table equal to 0.0 feet from the surface during the growing season.

#124 Skipopa silt loam (0-3 percent slopes) is a very deep, somewhat poorly drained soil frequently found on terraces. Permeability of the Skipopa soil is very slow and available water capacity is high. The Skipopa soil is mapped on the northern portion of the site. The Skipopa soil is not included on the local hydric soil list, however the hydric Bellingham series may occur as an inclusion in this mapped unit.

4.3 City of Mount Vernon Wetland and Stream Inventory (January 2000)

The City of Mount Vernon compiled a wetland and stream inventory with the assistance of Shannon and Wilson Inc. Geotechnical and Environmental Consultants. The inventory was compiled utilizing existing resource information including NWI, Skagit Soil Survey, Department of Natural Resources Water Resource Inventory and aerial photographs. The inventory also incorporated site-specific assessments prepared in association with development proposals and windshield surveys. The southeast corner of the subject property is included within an area identified as a potential palustrine emergent wetland. The area identified is currently occupied by a single family residence. Review of the inventory does not indicate that site specific analysis was utilized in identifying the potential wetland boundaries. However, a windshield survey relying primarily on the presence of wetland vegetation conducted prior to construction of the residence may be the rationale for identifying a portion of the parcel as a potential wetland.



Source: NWI Mount Vernon, WA (1989)

Source: Skagit Soil Survey, Sheet 42 (1989)

5. Site Investigation

GBA conducted our original investigation during late spring of 2009. The purpose of this assessment is to assess current conditions in order to determine if the environmental baseline has changed in the intervening seven years and to confirm current wetland boundaries. The following discussion documents the procedures and methods utilized in our most recent wetland investigation (January 2016) and summarize our findings.

5.1 Methodology

GBA utilized the 1987 Corps of Engineers Wetland Delineation Manual (Technical Report Y-87-1) in the preparation of this report. The Corps Manual and Western Mountains, Valley’s and Coast Regional Supplement represent the accepted standard for identifying and delineating wetlands for jurisdictional purposes under the Clean Water Act. And the City of Mount Vernon for use in conjunction with the Growth Management Act mandated Critical Areas Ordinance. The manual incorporates the Clean Water Act Definition of Wetlands as follows:

“Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.”

The City’s Critical Areas Ordinance stipulates additional defining elements as follows:

“Wetlands do not include those artificial wetlands created from non-wetland sites, including but not limited to, irrigation and drainage ditches, grass lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands.”

The definition requires that three interrelated defining elements or parameters be established when identifying wetlands. These parameters are wetland hydrology, hydric soils and hydrophytic vegetation.

5.1.1 Wetland Hydrology

Water is the driving force that creates and sustains wetlands. The 1987 Manual and subsequent Corps guidance identifies wetlands as areas where soils are inundated or continuously saturated for a minimum of 5% of the growing season (approximately 12.5 days for Western Washington). When direct observation of the water table cannot be made, hydrology is determined by relying upon hydrologic indicators such as hydric soil characteristics, water marks, drift lines, sediment deposits or drainage patterns.

Onsite surface hydrology consists of four features including Maddox Creek and 3 wetlands varying in size from 2.1 acres to 220 square feet. Maddox Creek bisects the parcel at a point of approximately 700 feet north of Blackburn Road. A centrally located wetland (Wetland A), approximately 2.1 acres in size, as identified through GBA's 2009 assessment dominates the open meadow. A small, 220 square foot wetland (Wetland B) is located adjacent to Lots 16 and 17 of Big Fir North. A 10,000 square foot wetland (Wetland C) is located along the northwestern portion of the property east of the terminus of Balsam Lane.

Maddox Creek is a well-defined incised channel feature which exhibits wetland areas within its banks and is charged by seasonal storm flows. The centrally located Wetland A and Wetland B receive hydrology from surface sheet flows, precipitation and a seasonal water table that is at or near the surface during a portion of the growing season. The northwestern wetland was not identified or delineated in our 2009 assessment, however hydrology was observed entering the site along the northern property boundary through a white PVC pipe. An observation was included in the report as follows:

While Wetland B was the only area along the northwestern property line identified as a regulated wetland, the entire area is receiving drainage from offsite locations and may be transitioning to wetland status.

5.1.2 Hydric Soils

Wetlands exhibit hydric soils. These are soils which are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions. These are conditions where no free oxygen is present in the upper soil horizons. Typical field indicators of hydric soils are the presence of a thick organic layer, or in predominantly mineral soils such as found on this site, a low chroma matrix (gray color) and/or bright mottling. Soil chromas are determined by comparing soil samples with color chips in the Munsell Color Charts.

Soils onsite were found to be generally consistent with the descriptions of #124 Skipopa silt loam (0-3 percent) and #17 Bow gravelly loam (3 – 8 percent). Areas exhibiting hydric soil characteristics were generally found at locations subject to a high water table consistent with hydric criteria 2, a) as described under subsection 3.2 of this report.

5.1.3 Hydrophytic Vegetation

The U.S. Fish and Wildlife Service has classified wetland vegetation according to its frequency of occurrence in wetlands:

- Obligate wetland species (OBL) occur in wetlands greater than 99% of the time.
- Facultative wetland species (FACW) occur in wetlands greater than 67% of the time.
- Facultative species (FAC) occur in wetlands 34%-66% of the time.
- Facultative upland species (FACU) occur in wetlands less than 34% of the time.
- Upland species (UPL) occur in wetlands less than 1% of the time.

Generally the hydrophytic vegetation parameter is satisfied when greater than 50% of the species present at an observation point have an indicator status of OBL, FACW and/or FAC; when two or more dominant species have observed morphological or known physiological adaptations for occurrence in wetlands; or when other indicators of hydrophytic vegetation are present.

Vegetation onsite was observed to be predominantly a mix of facultative trees, shrubs and groundcover with few obligate or upland species. Obligate species were limited to communities of skunk cabbage within the banks of Maddox Creek and slough sedge located at discrete locations in forested areas and adjacent to the northern property boundary.

5.2 Data Collection

The site investigation was initiated on January 25, 2016. Two transects were established 1) near the terminus of Balsam Lane (data points 1 and 2) and 2) along a topographic break in the southern pasture (data points 3 and 4). Data were assessed at each transect to correspond to and confirm our earlier findings relative to data assessed in 2009. Data points 1 and 2 indicated a need for further assessment during early spring. Data points 3 and 4 confirmed our earlier findings relative to the open pasture and Wetland A. Data points 5, 6, 7, 8, and 9 were assessed on April 7 and 8, 2016 in order to identify and delineate Wetland C. Soil test pits were dug to a depth of 20 inches. Hydrology, soil and vegetation were assessed at each data point. Data was documented in field notes for subsequent transfer to wetland determination data forms. Photographs were taken of soil profiles and test pits. Data collected is summarized on the following table. (Attachment A: Wetland Determination Data Forms)

Table 1 – Wetland Data Summary

DP	HYDROLOGY	SOIL	DOMINANT VEGETATION	STATUS
1	*Water table @ 4" – Saturation to soil surface	*Silt loam – 10YR 2/1	* <i>Alnus rubra</i> FAC (5%) <i>Rosa nutkana</i> FAC (40%) <i>Rubus spectabilis</i> FAC (20%) <i>Carex obnupta</i> OBL (50%)	Wet
2	Water table @10"	Gravelly silt loam – 2.5Y 3/3 – No redox	* <i>Rubus spectabilis</i> FAC (10%) <i>Rosa nutkana</i> FAC (10%) <i>Ranunculus repens</i> FAC (70%) <i>Juncus effuses</i> FACW (20%)	Up
3	no indicators	sandy loam – 2.5Y 4/3 – 5% redox – 7.5YR 4/6	* <i>Rubus armeniacus</i> FACU (5%) <i>Phalaris arundinacea</i> FACW (50%) <i>Holcus lanatus</i> FAC (20%) <i>Agrostis tenuis</i> FAC (20%)	Up
4	*water table @ 4" – saturation to surface	*sandy silt loam – 10YR 2/1 -	* <i>Phalaris arundinacea</i> FACW (90%) <i>Holcus lanatus</i> FAC (5%) <i>Agrostis tenuis</i> FAC (5%)	Wet

* Wetland parameter met

DP	HYDROLOGY	SOIL	DOMINANT VEGETATION	STATUS
5	Water table @ 10" – saturation @ 9"	Gravelly silt loam – 2.5Y 3/3 - no redox	<i>Thuja plicata</i> FAC (40%) <i>Psuedotsuga menziesii</i> FACU (40%) <i>Alnus rubra</i> FAC (10%) <i>Rubus spectabilis</i> FAC (30%) <i>Polystichum munitum</i> FACU (10%) <i>Symphoricarpos albus</i> FACU (10%) <i>Rubus ursinus</i> FACU (5%)	Up
6	*Water table @ 10" – Saturation @ 8"	*Silt loam – 10YR 2/1 – Thick dark surface	* <i>Alnus rubra</i> FAC (60%) <i>Cornus stolonifera</i> FACW (50%) <i>Rosa nutkana</i> FAC (20%) <i>Tellima grandiflora</i> FAC (10%)	Wet
7	*Water Table @ 10 – Surface saturation – surface water @ 1" depth	*Silty clay loam – 2.5Y 5/1 and 3/2 – 5% redox -7.5YR 6/6	* <i>Alnus rubra sprigs</i> FAC (50%) <i>Juncus effuses</i> FACW (90%)	Wet
8	Water table @ 13" – Saturation @ 12"	Silty clay loam – 2.5Y 3/3 – < 2% Redox - 10YR 6/6	* <i>Alnus rubra sprigs</i> FAC (20%) <i>Thuja plicata</i> FAC (10%) <i>Rubus armeniacus</i> FACU (30%) <i>Rubus spectabilis</i> FAC (10%)	Up
9	* Water able @ 8" – Saturation at 6"	*Silty clay loam – 10YR 3/2 – 5% redox 10YR 4/6	* <i>Cornus stolonifera</i> FAC (50%) <i>Rosa nutkana</i> FAC (20%) <i>Lonicera involucrate</i> FAC (20%) <i>Tellima grandiflora</i> FAC (80%)	Wet

* Wetland parameter met

5.3 Wetlands Identified and Delineated

Three wetlands were identified and delineated through assessment of the above data:

Wetland A as delineated in 2009 was confirmed through assessment of data points 3 and 4. Wetland A is a 93,213 square foot (2.1 acre) depressional wetland that includes palustrine emergent seasonally flooded and palustrine scrub shrub seasonally flooded classes (Cowardin et. al., 1979). The wetland is the dominant landscape feature over the pasture area north of the existing homesites and extends to the east into an area dominated by scrub shrub vegetation. The wetland receives its hydrologic charge from localized on site and off site stormwater runoff, precipitation and a seasonal high water table. Indicators of wetland hydrology were present at data point 4 in the form of a seasonal high water table and saturation to the soil surface. Drainage patterns were present at a number of locations within the wetland and a prominent ditch draining to Maddox Creek appears to represent an historic attempt at draining the pasture area for agricultural purposes. Soil is a sandy silt loam, exhibiting hydric indicators in a very dark matrix chroma accompanied by contrasting redoximorphic features. Vegetation consists of facultative grasses dominated by reed canary grass. The wetland transitions from the pasture east to a mixed scrub shrub community dominated by salmonberry (*Rubus spectabilis*).



Photo 1 – View of soil profile and test pit at wetland data point 4 showing dark matrix chroma and water table at 4 inches from soil surface.



Photo 2 – View north showing open pasture portion of Wetland A dominated by reed canarygrass. Data points 3 and 4 are shown at arrows.

Wetland B is a 220 square foot depressional/palustrine scrub shrub seasonally flooded wetland located adjacent to Lots 16 and 17 of Big Fir North. Flags from our 2009 assessment were intact and observed to accurately represent the wetland boundary. No additional data was collected. The wetland receives its hydrologic charge from offsite runoff which collects along the western property line. The source of runoff appears to be emanating from developed areas to the north and west. Soil was a gravelly silt loam exhibiting a very dark matrix chroma. Vegetation is dominated by a mix of facultative plant species and includes a vigorous community of the obligate slough sedge.

Wetland C is a depressional/palustrine, scrub shrub, seasonally flooded wetland of 0.23 acres (10,101 square feet). The wetland was identified through the assessment of data points 1, 2, 5, 6, 7, 8, and 9. The area was not recognized as wet during our 2009 site assessment, however, surface hydrology was observed entering the site from the east via a white PVC pipe. The area was assessed at data points 1 and 2 on January 23rd and determined to require additional assessment during the early spring. The area was revisited on April 7th and 8th and data points 5, 6, 7, 8, and 9 were evaluated. Wetland data points (6, 7, 9) exhibited a very dark matrix chroma of 1 or a chroma of 2 accompanied by contrasting redoximorphic features. Vegetation consisted of a mix of facultative trees, shrubs and herbaceous species. Upland data points exhibited no hydrology indicators, and were accompanied by lighter soils, fewer or no redoximorphic features and a similar mix of facultative plant species. Data point 5 failed to meet the vegetation parameter. (Attachment B: Wetland Delineation Site Plan)

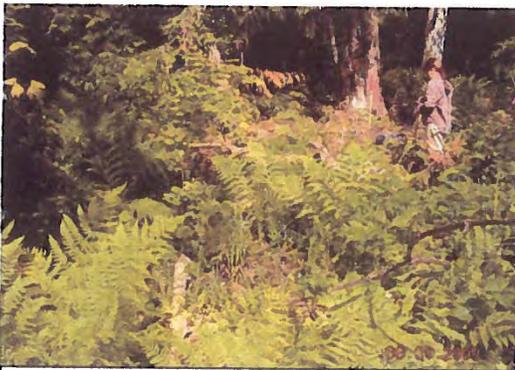


Photo 3 – View of Wetland B in June 2009. Vegetation is dominated by a mix of facultative herbs, shrubs and trees including slough sedge.

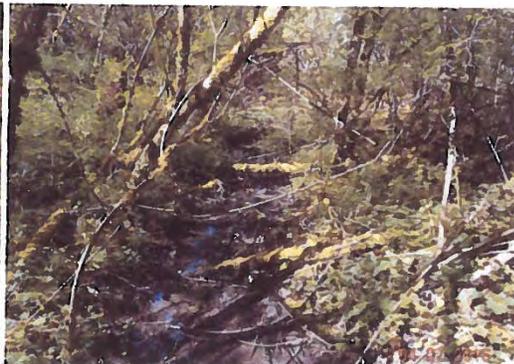


Photo 4 – View of Wetland C south of white PVC pipe showing surface saturation and facultative vegetation community.

5.4 Wetland Rating & Functions

The wetland was rated under the Washington State Wetland Rating System for Western Washington, 2014 Update (October 2014 – Effective January 2015). The rating system is designed to differentiate between wetlands based on their sensitivity to disturbance, rarity, the functions they provide and whether or not they can be replaced. The rating system divides wetlands into six different hydrogeomorphic (HGM) classes. These classes sort wetlands into groups that function in similar ways. The rating system then rates the wetlands based on specific functional attributes relating to water quality, hydrologic and habitat functions. The following table summarizes the assessment of wetland A as detailed in the ratings attached to the report. (Attachment C: Wetland Rating Forms)

Table 2: Wetland Rating Summary

Wetland	HGM	Cowardin	Water Quality	Hydrologic	Habitat	Total	Category
A	depressional	*PEMSSA	7	6	5	18	III
B	depressional	PEMSSA	6	5	4	15	IV
C	depressional	PEMSSA	7	6	4	17	III

*PEMSSA = Palustrine Emergent Scrub Shrub Temporarily Flooded

Wetlands A and C were rated as Category III with a total of 18 and 17 points respectively. “Category III wetlands are wetlands with a moderate level of functions. These wetlands have generally been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.”

Wetland B received a Category IV rating, in part because of its discrete nature and very small size. “Category IV wetlands have the lowest level of functions (scores fewer than 16 points) and are often heavily disturbed. These are wetlands that we should be able to replace, and in some cases be able to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions and also need to be protected.”

6. Stream Study

GBA identified the location of the OHWM of Maddox Creek based on guidance contained in the definition included in the CAO under section 15.40.170 B.

“Ordinary High Water Mark: On lakes and streams, that mark that will be found by examining the beds and banks and ascertaining where the presence and action of waters are so common and usual, and so long continues in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on the effective date of regulations, as it may naturally change thereafter, or as it may change in accordance with permits issued by the City or state. Where the ordinary high water mark cannot be found, it shall be the stage of the stage of the 50 percent exceedance flow, according to the period of record of a measured or synthetic hydrograph. For braided streams, the ordinary high water mark is found on the banks forming the outer limits of the depression within which the braiding occurs.”

Section 15.40.080 D. 3. provides additional guidance relating to identification of the OHWM as it relates to buffer measurement:

“... Buffers shall be measured from the ordinary high water mark (OHWM) or from the top of the bank where the OHWM cannot be identified. ...”



Photo 5 – View of Maddox Creek showing the OHWM as identified along the top of bank. The top of bank was consistent with an associated wetland edge. No attempt was made to delineate the wetland as the OHWM and wetland edge were viewed as coexistent. The wetland edge was also observed to be at the transition from obligate vegetation consisting of skunk cabbage to facultative upland species including sword fern. Maddox Creek and the OHWM were surveyed over the site (Lisser and Associates, 2009) as represented on the Attachment C: Wetland Delineation Site Plan. .

6.1 Riparian Functions

The general character and classification of Maddox Creek was discussed earlier in this report under existing conditions. The creek is bordered by a mature forested buffer which provides a full range of riparian functions including:

LWD Recruitment - Large conifers are generally the preferred source of LWD, the presence of a mature forest community dominated by Douglas fir and western red cedar provides an ongoing source for recruitment of woody material into the stream. LWD promotes complexity within the stream and provides holding areas for salmonids and resident fish species. Woody material was observed within the stream channel at several location and would be expected to recruit on an ongoing basis.

Bank Stability – The three strata vegetation community along the riparian corridor promotes bank stability through establishment of deep root systems. The anchored roots help hold the gravelly silt loam of the banks intact and minimize the forces of erosion, sedimentation and increased turbidity.

Shade - The forest canopy provides shade during low flow summer months and helps to maintain cool temperatures and dissolved oxygen levels required by salmonids and resident fish species. The width of the forested buffer likely maintains a stable microclimate on a year round basis.

Water Quality – Shrubs and emergent vegetation contiguous to the OHWM provide for the filtering of sediments and pollutants. The filtering function helps prevent delivery of sediments and pollutants to receiving waters.

Fish and Wildlife Habitat – While no salmonids or resident fish species were observed during our site investigation, Maddox Creek is reportedly utilized by Coho salmon (*Oncorhynchus kisutch*) and cutthroat trout (*Salmo clarki clarki*). Riparian corridors are utilized by many wildlife species on a preferential basis and may provide a migratory corridor within the urban context of the City.

7. Mitigation

Adherence to the standard stream and wetland buffer requirements is generally considered the preferred method of “avoiding” project generated impacts pursuant to the mitigation sequence listed under 15.40.080 E. 4.

7.1 Maddox Creek Stream Buffer

Subsection 15.40.080 D. 3. establishes the standard buffer width for Maddox Creek (F type water) at 150 feet. In addition to the standard buffer width a 15 foot building setback is required from the outside edge of the buffer. If native vegetation communities are insufficient in providing the necessary buffer functions, enhancement plantings may be required. GBA have determined through our site investigation that the existing mature forested buffer and diverse native understory provide sufficient riparian functions including: LWD recruitment, shade, bank stability, water quality and wildlife habitat. The standard 150 foot stream buffer will be applied to Maddox Creek. Temporary impacts to the buffer will result from installation of a 12 inch pipe from the stormwater pond to an outfall at Maddox Creek equipped with an energy dissipater. The pipe will be located to avoid significant vegetation and, once installed, will be covered with native soil and replanted with native shrubs common to the project site.

7.2 Wetland A Buffer

Subsection 15.40.090 F. 1. of the CAO establishes the standard buffer width for Wetland A (Category III wetland) at 75 feet. Wetland buffers are measured on a horizontal plane landward of the wetland edge as surveyed in the field. The standard buffer width presumes the presence of a relatively intact native vegetation community. GBA consider the existing emergent, scrub shrub and forested condition of upland buffers to be consistent with the “relatively intact” standard. Buffers are to be maintained in an undisturbed natural condition.

7.3 Wetland B Buffer

Subsection 15.40.090 F. 1. Establishes the standard buffer for Wetland B (Category IV wetland) at 50 feet. Because a proposed detention pond will be located in Tract A approximately 37.5 feet from the edge of Wetland B, a buffer averaging plan is proposed. Subsection 15.40.090 F. 4. provides for buffer width averaging on a case by case basis provided that the following criteria area satisfied (criteria appear in italics followed by response):

a. No feasible site design without buffer averaging;

The short subdivision has been designed to avoid and minimize impacts to wetlands and streams. The project avoids impacts to Wetland A and Maddox Creek by applying the standard buffer requirements. Wetland B is a very small Category IV wetland located entirely within the standard 150 foot stream buffer of Maddox Creek. The stream and wetland buffer extend to a point approximately 25 feet from the proposed detention pond. The buffer averaging proposal will extend the buffer an additional 12.5 feet toward the pond resulting in a buffer of 37.5 feet. The seven proposed residential lots are all located contiguous or adjacent to the northern property boundary leaving only the triangular shaped Tract A for storm water detention. The majority of the site will be protected as critical areas and associated buffers.

b. It will not reduce wetland functions or functional performance;

It is our opinion that the functions of Wetland B will receive sufficient protection by virtue of its location within the outer portion of the standard 150 foot buffer of Maddox Creek. The additional 12.5 feet adjacent to the pond along with added buffer width at another strategic location will assure that wetland and buffer function are mainlined.

c. The wetland contains variations in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils or vegetation, and the wetlands would benefit from a wider buffer in places and would not be adversely impacted by a narrower buffer in other places;

Wetland B itself is less sensitive than other critical areas on site because of its relative small size, Category IV rating and discrete location within the standard buffer of Maddox Creek. Vegetation is limited to emergent and scrub shrub species. By decreasing the buffer width to accommodate stormwater facilities and providing additional buffer width along the forested area associated with Maddox Creek, protection of the Maddox Creek corridor and Wetland A can be increased.

d. The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer;

The total buffer area after averaging is will be greater than that required under the standard buffer. The buffer has been reduced by a total of 1,420 square feet and increased by 1,549 square feet along the southern forested portion of the buffer associated with Wetland A. It is our professional opinion that increasing the buffer width in this area will result in greater protection to the forested Maddox Creek corridor. It is also noteworthy that the stormwater facility itself is anticipated to replicate wetland functions by moderating and attenuating storm water flows.

e. The buffer width is not reduced to less than 75 percent of the standard buffer width, applicable to the wetland category, or 35 feet for category IV wetlands.

The buffer width will not be reduced below 35 feet. The buffer width will be maintained at 37.5 feet. (Attachment D: Buffer Averaging Site Plan)

7.4 Wetland C - Mitigation Bank

The proposed short plat access road off of Balsam Lane will cross Wetland C and require unavoidable impacts to the wetland and buffer. The only other point of access would be off of East Blackburn Road requiring construction of 1,150 linear feet of road and a crossing of Wetland A and its buffer as well as Maddox Creek and its buffer. Review of the location and extent of critical area on the project site indicate that the Balsam Lane route minimizes critical area impacts. Although only a portion of Wetlands C will be filled for the crossing, portion of lots 1 and 2 and Tract A will also be utilized for the residential subdivision. Direct and buffer impacts are considered to constitute a significant impairment of wetland functions. Accordingly, the functions lost from these wetlands and buffers will be mitigated for at the Nookachamps Wetland Mitigation Bank. The functions include shallow sub-surface water storage and exchange, and habitat functions such as flora and faunal support associated with tree and shrub canopy strata. GBA have discussed the mitigation approach with mitigation bank managers and confirmed the availability of credits at the bank for these wetland functions. Wetland C is located in the service area of the Nookachamps and Skagit Environmental Banks. Mitigation at an authorized wetland mitigation bank will address the water quality, hydrologic and habitat functions that will be impacted on site.

7.5 Native Growth Protection Area (NGPA)

Provisions addressing designation, management and maintenance of the NGPA are addressed under MVMC 15.40.040 L.

Maddox Creek and its Standard 150 foot buffer, Wetland A and its standard 75 foot buffer and Wetland B and its averaged 37.5 foot buffer and associated area of buffer increase are required to be designated as a native growth protection area (NGPA). Designation of the NGPA may occur through conservation easement, protective easement or tract and deed restriction. The NGPA may require permanent fencing at the discretion of the Director. Signage posted at 150 foot intervals must be placed along the common boundary between the NGPA and the abutting land. Suggested language is provided under the Critical Areas Ordinance:

“Protection of this natural area is in your care. Alteration or disturbance is prohibited by law.”

Responsibility for maintenance of the NGPA shall be held by a homeowners association, abutting lot owner, the permit applicant, designee or other entity as approved by the City. A note is required to be placed on the face of the short plat reading:

“MAINTENANCE RESPONSIBILITY”: All owners of lots created by or benefitting from this City action abutting or including a native growth protection easement (tract) are responsible for maintenance and protection of the easement (tract). Maintenance includes insuring that no alterations occur within the tract and that all vegetation remains undisturbed unless the express written authorization of the City has been received.”

8. Closure

GBA utilized currently accepted standards, methods and protocols in assessing the subject property. The professional opinions rendered in this report should, however, be reviewed by agencies of jurisdiction for concurrence prior to initiating land use actions or construction activities. Please call either Oscar Graham or myself with any questions relating to this report. We are available to confer with agency representatives relative to our findings and conclusions at your request.

Patricia Bunting
Wetland Ecologist, PWS

Oscar Graham
Environmental Planner

9. References

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- Hruby, T. (2014). *Washington State Wetland Rating System for Western Washington; 2014 Update*. (Publication #14-06-029). Olympia, WA: Washington Department of Ecology.
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- WSP. 2008. *City of Mount Vernon Stream Survey Maps*. Data collected by WSP Environment and Energy Seattle, WA. Data Summarized and Presented by City of Mount Vernon, January 2009.

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

Project/Site: East Village Short plat/2437 East Blackburn Rd. City/County: Mount Vernon/Skagit County Sampling Date: 1/25/16
 Applicant/Owner: Dave Pruztman State: WA Sampling Point: DP-1
 Investigator(s): Pat & Oscar, Graham-Bunting Associates Section, Township, Range: S 28, T34N, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2-5
 Subregion (LRR): A, Northwest Forests and Coast Lat: 48.408140 Long: -122.308922 Datum: _____
 Soil Map Unit Name: #124, Skippopa silt loam, 0-3% NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: North of creek	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>25r</u>)				
1. <u>Alnus rubra</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>5</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>10r</u>)				
1. <u>Rubus armeniacus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. <u>Rubus spectabilis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Rosa nutkana</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>65</u>	= Total Cover		
Herb Stratum (Plot size: <u>5r</u>)				
1. <u>Carex obnupta</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
	<u>50</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>10r</u>)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____	
	_____	= Total Cover		
% Bare Ground in Herb Stratum _____				
Remarks: Hydrophytic vegetation indicator, >50% FAC or greater, is met.				

SOIL

Sampling Point: DP-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR2/1	100					slt lm	
10+	2.5Y3/3	99	10YR5/6	1	C	M	grav. clay lm	

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

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

<input type="checkbox"/> Histic Sol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Hydric soil indicators are met. Soil chroma at 10" is dark, chroma of 1.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 4"	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): surface	

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

Remarks: Wetland hydrology indicators are met. Soil saturation and watertable are present.

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

Project/Site: East Village Short plat/2437 East Blackburn Rd. City/County: Mount Vernon/Skagit County Sampling Date: 1/25/16
 Applicant/Owner: Dave Pruztman State: WA Sampling Point: DP-2
 Investigator(s): Pat & Oscar, Graham-Bunting Associates Section, Township, Range: S 28, T34N, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2-5
 Subregion (LRR): A, Northwest Forests and Coast Lat: 48.408140 Long: -122.308922 Datum: _____
 Soil Map Unit Name: #124, Skippopa silt loam, 0-3% NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: North of creek near drainage channel from the north pipe	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 25r)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: 10r)				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. <u>Rubus spectabilis</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Rosa nutkana</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Alnus rubra, sprigs</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: 5r)				
1. <u>Ranunculus repens</u>	<u>70</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Juncus effuses</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: 10r)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: Hydrophytic vegetation indicator, >50% FAC or greater, is met. Dominance test is 100%				

SOIL

Sampling Point: DP-2

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-9	10YR2/1	100						silt lm	
9+	2.5Y3/3	99	10YR5/6	<1	C	M		gr sl.lm	

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

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

<input type="checkbox"/> Histic Sol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Hydric soil indicators are not met. Soil chroma below 9" is 3, not dark and redox features are less than 1% .

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 10"	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	

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

Remarks: Wetland hydrology indicators are not met. Soil saturation is not in the majority of the root zone and the winter watertable is at 10" .

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

Project/Site: Short plat/2601 East Blackburn Rd. City/County: Mount Vernon/Skagit County Sampling Date: 1/25/16
 Applicant/Owner: Dave Pruztman/Maggie Wallace State: WA Sampling Point: DP-3
 Investigator(s): Pat & Oscar, Graham-Bunting Associates Section, Township, Range: S 28, T34N, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2-5
 Subregion (LRR): A, Northwest Forests and Coast Lat: 48.408140 Long: -122.308922 Datum: _____
 Soil Map Unit Name: #17, Bow gravelly loam, 3-8% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Data is collected near wetland flag 1 on south end of wetland A	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>25r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10r</u>)				
1. <u>Rubus armeniacus</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>5r</u>)				
1. <u>Phalaris arundinacea</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Holcus lanatus</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Agrostis tenuis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Dactylis glomerata</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
5. <u>Juncus effusus</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: <u>10r</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
 Total Number of Dominant Species Across All Strata: 4 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

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

Hydrophytic Vegetation Indicators:
 Rapid Test for Hydrophytic Vegetation
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Wetland Non-Vascular Plants¹
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

Remarks: Hydrophytic vegetation indicator, >50% FAC or greater, is met. Dominance test is 75%

SOIL

Sampling Point: DP-3

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-8	10YR2/2	100					sandy, silt lm	
8+	2.5Y4/3	95	7.5YR4/6	5	C	M	sandy lm	

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

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

<input type="checkbox"/> Histic Sol (A1)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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

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

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Hydric soil indicators are not met. Soil chroma below 8 inches is 3 with redox.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): >12" _____

Saturation Present? (includes capillary fringe) Yes No Depth (inches): 10" _____

Wetland Hydrology Present? Yes No

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

Remarks: Wetland hydrology indicators are not met. Soil saturation and watertable are below 10 and 12" during wet season.

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

Project/Site: Short plat/2601 East Blackburn Rd. City/County: Mount Vernon/Skagit County Sampling Date: 1/25/16
 Applicant/Owner: Dave Pruztman/Maggie Wallace State: WA Sampling Point: DP-4
 Investigator(s): Pat & Oscar, Graham-Bunting Associates Section, Township, Range: S 28, T34N, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2-5
 Subregion (LRR): A, Northwest Forests and Coast Lat: 48.408140 Long: -122.308922 Datum: _____
 Soil Map Unit Name: #17, Bow gravelly loam, 3-8% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Data is collected near wetland flag 1 on south end of wetland A	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 25r)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: 10r)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				_____ = Total Cover
Herb Stratum (Plot size: 5r)				
1. <u>Phalaris arundinacea</u>	<u>90</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Holcus lanatus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
3. <u>Agrostis tenuis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u>Juncus effusus</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
				<u>101</u> = Total Cover
Woody Vine Stratum (Plot size: 10r)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
				_____ = Total Cover
% Bare Ground in Herb Stratum _____				
Remarks: Hydrophytic vegetation indicator, >50% FAC or greater, is met. Dominance test is 100%				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

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

Hydrophytic Vegetation Indicators:
 Rapid Test for Hydrophytic Vegetation
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Wetland Non-Vascular Plants¹
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: DP-4

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-11	10YR2/1	100						sandy silt lm	
11+	2.5Y3/2	90	7.5YR5/6	10	C	M		sandy lm	

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

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

<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Depleted Dark Surface (F7)	
	<input type="checkbox"/> Redox Depressions (F8)	

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

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

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Hydric soil indicators are met. Soil chroma in thick dark surface is 1.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 4"	
Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 0"	

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

Remarks: Wetland hydrology indicators are met. Soil saturation and high watertable are near the surface.

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

Project/Site: East Village Short plat/2437 East Blackburn Rd. City/County: Mount Vernon/Skagit County Sampling Date: 4/7/16
 Applicant/Owner: Dave Pruztman State: WA Sampling Point: DP-5
 Investigator(s): Pat & Oscar, Graham-Bunting Associates Section, Township, Range: S 28, T34N, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2-5
 Subregion (LRR): A, Northwest Forests and Coast Lat: 48.408140 Long: -122.308922 Datum: _____
 Soil Map Unit Name: #124, Skippopa silt loam, 0-3% NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: North of creek near northerly boundary in old tire ruts, mixed forest	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>25r</u>)																				
1. <u>Thuja plicata</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)																
2. <u>Psuedotsuga menziesii</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>																	
3. <u>Alnus rubra</u>	<u>10</u>	<u>N</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
		<u>90</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>10r</u>)																				
1. <u>Rubus spectabilis</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B)																			
Prevalence Index = B/A = _____																				
2. <u>Polystichum munitum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>																	
3. <u>Symphoricarpos albus</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
		<u>50</u> = Total Cover																		
Herb Stratum (Plot size: <u>5r</u>)																				
1. <u>Rubus ursinus</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
		<u>5</u> = Total Cover																		
Woody Vine Stratum (Plot size: _____)																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																
2. _____	_____	_____	_____																	
		_____ = Total Cover																		
% Bare Ground in Herb Stratum <u>90</u>																				
Remarks: Hydrophytic vegetation indicator, >50% FAC or greater, is not met. Dominance test is less than 50%																				

SOIL

Sampling Point: DP-5

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10	2.5Y3/3	100					slt lm	
10+	2.5Y3/3 & 4/1	80	10YR5/6	>20%	C	M	gr sl.lm	sample in low ruts

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

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

<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Depleted Dark Surface (F7)	
	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Hydric soil indicators are not met. Soil chroma at 10" is 3, not dark and redox features are below 10"

HYDROLOGY

Wetland Hydrology Indicators:

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

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): 10"

Saturation Present? (includes capillary fringe) Yes No Depth (inches): 9"

Wetland Hydrology Present? Yes No

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

Remarks: Wetland hydrology indicators are not met. Soil saturation is not in the majority of the root zone and the winter watertable is at 10".

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

Project/Site: East Village Short plat/2437 East Blackburn Rd, City/County: Mount Vernon/Skagit County Sampling Date: 4/7/16
 Applicant/Owner: Dave Pruztman State: WA Sampling Point: DP-6
 Investigator(s): Pat & Oscar, Graham-Bunting Associates Section, Township, Range: S 28, T34N, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2-5
 Subregion (LRR): A, Northwest Forests and Coast Lat: 48.408140 Long: -122.308922 Datum: _____
 Soil Map Unit Name: #124, Skippopa silt loam, 0-3% NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: North of creek near northerly boundary west of DP5 in low area	

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 25r)				
1. <u>Alnus rubra</u>	<u>60</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>60</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: 10r)				
1. <u>Cornus stolonifera</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. <u>Rosa nutkana</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Symphoricarpos albus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>75</u> = Total Cover				
Herb Stratum (Plot size: 5r)				
1. <u>Tellima grandiflora</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>10</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>70</u>				
Remarks: Hydrophytic vegetation indicator, >50% FAC or greater, is met. Dominance test is 100%				

SOIL

Sampling Point: DP-6

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10	10YR2/1	100					silt lm	
10+	10YR2/2	99	10YR5/6	>1%	C	M	sl.lm	

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Hydric soil indicators are met. Soil chroma at 10" is 1, dark

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 10"	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 8"	

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

Remarks: Wetland hydrology indicators are met. Soil saturation is in the majority of the root zone.

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

Project/Site: East Village Short plat/2437 East Blackburn Rd. City/County: Mount Vernon/Skagit County Sampling Date: 4/8/16
 Applicant/Owner: Dave Pruztman State: WA Sampling Point: DP-7
 Investigator(s): Pat & Oscar, Graham-Buntling Associates Section, Township, Range: S 28, T34N, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2-5
 Subregion (LRR): A, Northwest Forests and Coast Lat: 48.408140 Long: -122.308922 Datum: _____
 Soil Map Unit Name: #124, Skippopa silt loam, 0-3% NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <u>North of creek near NW boundary and drainage channel</u>	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>25r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10r</u>)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. <u>Alnus rubra, sprigs</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Lonicera involucrata</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
3. <u>Cornus stolonifera</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. <u>Rosa nutkana</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
<u>75</u> = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>5r</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Juncus effusus</u>	<u>90</u>	<u>Y</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>90</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: <u>Hydrophytic vegetation indicator, >50% FAC or greater, is met. Dominance test is 100%</u>				

SOIL

Sampling Point: DP-7

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-8	10YR2/1	100						clv.lm	
8+	2.5Y5/1 & 3/2	95	7.5YR6/6	5%	C	M		slclv.lm	mix soils

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Hydric soil indicators are met. Predominant Soil chroma at 10" is 1, dark and mixed with other soil

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 1	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): 10"	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): surface	

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

Remarks: Wetland hydrology indicators are met. Soil saturation is in the majority of the root zone.

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

Project/Site: East Village Short plat/2437 East Blackburn Rd. City/County: Mount Vernon/Skagit County Sampling Date: 4/8/16
 Applicant/Owner: Dave Pruztman State: WA Sampling Point: DP-8
 Investigator(s): Pat & Oscar, Graham-Bunting Associates Section, Township, Range: S 28, T34N, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2-5
 Subregion (LRR): A, Northwest Forests and Coast Lat: 48.408140 Long: -122.308922 Datum: _____
 Soil Map Unit Name: #124, Skippopa silt loam, 0-3% NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: North of creek near NE 1/4 of site in low spot	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u>25r</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Alnus rubra</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)	
2. <u>Thuja plicata</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
	<u>30</u>	= Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10r</u>)					
1. <u>Rubus armeniacus</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
2. <u>Rubus spectabilis</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		
3. <u>Sambucus racemosa</u>	<u>5</u>	<u>N</u>	<u>FACU</u>		
4. <u>Cornus stolonifera</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
5. <u>Althyrium felix-femina</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
	<u>55</u>	= Total Cover			
<u>Herb Stratum</u> (Plot size: <u>5r</u>)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
	_____	= Total Cover			
<u>Woody Vine Stratum</u> (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
	_____	= Total Cover			
% Bare Ground in Herb Stratum _____					
Remarks: Hydrophytic vegetation indicator, >50% FAC or greater, is met. Dominance test is 75%					

SOIL

Sampling Point: DP-8

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-5	10YR3/2	100					sl lm	
5-8	2.5Y3/3	99	10YR6/6	<2	C	M	slclv lm	mix soils
8+	2.5Y6/2	80	10YR6/8	20	C	M	clay loam	

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Indicators for Problematic Hydric Soils³:

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

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Hydric soil indicators are not met. Predominant soil chroma at 8" is 3 and not dark. Distinct mottles exist but are less than 2% at 8".

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): 13"

Saturation Present? Yes No Depth (inches): 12"
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks: Wetland hydrology indicators are not met. Soil saturation is not in the majority of the root zone.

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

Project/Site: East Village Short plat/2437 East Blackburn Rd. City/County: Mount Vernon/Skagit County Sampling Date: 4/8/16
 Applicant/Owner: Dave Pruztman State: WA Sampling Point: DP-9
 Investigator(s): Pat & Oscar, Graham-Bunting Associates Section, Township, Range: S 28, T34N, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2-5
 Subregion (LRR): A, Northwest Forests and Coast Lat: 48.408140 Long: -122.308922 Datum: _____
 Soil Map Unit Name: #124, Skippopa silt loam, 0-3% NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: North of creek near NW 1/4 of site in low spot next to drainage channel coming from buried pvc pipe	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Tree Stratum (Plot size: <u>25r</u>)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
1. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
Sapling/Shrub Stratum (Plot size: <u>10r</u>)				Prevalence Index worksheet:
1. <u>Rosa nutkana</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. <u>Cornus stolonifera</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	OBL species _____ x 1 = _____
3. <u>Lonicera involucrata</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	FACW species _____ x 2 = _____
4. <u>Symphoricarpos albus</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	FAC species _____ x 3 = _____
5. <u>Oemleria cerasiformis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	FACU species _____ x 4 = _____
<u>105</u> = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5r</u>)				Hydrophytic Vegetation Indicators:
1. <u>Tellima grandiflora</u>	<u>80</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation
2. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50%
3. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
4. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. _____	_____	_____	_____	<input type="checkbox"/> Wetland Non-Vascular Plants ¹
6. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>80</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				
Remarks: Hydrophytic vegetation indicator, >50% FAC or greater, is met. Dominance test is 100%				

SOIL

Sampling Point DP-9

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-9	10YR2/1	100					sl.lm	
9+	10YR3/2	95	10YR4/6	5	C	M	slclv.lm	

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

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

<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Depleted Dark Surface (F7)	
	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Hydric soil indicators are met. Predominant soil chroma below 9" is 2, dark with redox.

HYDROLOGY

Wetland Hydrology Indicators:

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

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): 8

Saturation Present? Yes No Depth (inches): 6
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks: Wetland hydrology indicators are met. Soil saturation is in the majority of the root zone.

**Wetland Rating Forms
Including Exhibits**

Attachment C

Wetland name or number A Sect 28, T34N, R4E

RATING SUMMARY – Western Washington

Name of wetland (or ID #): "A" PRUTZMAN/WALLACE Date of site visit: 5/22/09 to 6/1/09
 Rated by Pat Bunting Trained by Ecology? Yes ___ No Date of training 9-30-14
 HGM Class used for rating Depressional Wetland has multiple HGM classes? ___ Y N

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

Source of base aerial photo/map imap - Skagit County, Google Earth
CITY OF MOUNT VERNON - 2000 INVENTORY

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

1. Category of wetland based on FUNCTIONS

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

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

FUNCTION	Improving Water Quality			Hydrologic			Habitat			
	Circle the appropriate ratings									
Site Potential	H	M	(L)	H	(M)	L	H	(M)	L	
Landscape Potential	(H)	M	L	H	(M)	L	H	M	(L)	
Value	(H)	M	L	H	(M)	L	H	(M)	L	TOTAL
Score Based on Ratings	7			6			5			18

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY			
	I	II	III	IV
Estuarine				
Wetland of High Conservation Value				
Bog				
Mature Forest				
Old Growth Forest				
Coastal Lagoon				
Interdunal				
None of the above	NA			

Wetland name or number _____

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

all maps attached at Pages 18-21

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland <i>(can be added to another figure)</i>	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream <i>(can be added to another figure)</i>	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
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 <i>(can be added to figure above)</i>	S 4.1	
Boundary of 150 ft buffer <i>(can be added to another figure)</i>	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 A

NO - go to 6

YES - The wetland class is **Riverine**

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

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

NO - go to 7

YES - The wetland class is **Depressional**

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

NO - go to 8

YES - The wetland class is **Depressional**

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

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

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

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

Wetland name or number A

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	<i>side flow</i>	
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		2
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 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)		
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	<i>5% 1</i>	
Wetland has persistent, ungrazed, plants > 1/2 of area points = 3		
Wetland has persistent, ungrazed plants > 1/10 of area points = 1 ✓	<i>mowed field > 1/2</i>	1
Wetland has persistent, ungrazed plants < 1/10 of area points = 0		
D 1.4. Characteristics of seasonal ponding or inundation:		
<i>by description</i> <i>This is the area that is ponded for at least 2 months. See description in manual.</i>		
Area seasonally ponded is > 1/2 total area of wetland points = 4		
Area seasonally ponded is > 1/4 total area of wetland ✓ points = 2 ✓		2
Area seasonally ponded is < 1/4 total area of wetland points = 0		
Total for D 1		5
Rating of Site Potential If score is: <u>12-16 = H</u> <u>6-11 = M</u> <u>X 0-5 = L</u> 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? <i>1 km poly at area</i>		
Yes = 1 No = 0		1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?		
Yes = 1 No = 0		1
D 2.3. Are there septic systems within 250 ft of the wetland?		
Yes = 1 No = 0		1
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1-D 2.3?		
Source _____	Yes = 1 (No = 0)	0
Total for D 2		3
Rating of Landscape Potential If score is: <u>X 3 or 4 = H</u> <u>1 or 2 = M</u> <u>0 = L</u> Record the rating on the first page		

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?		
Yes = 1 (No = 0)		0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?		
Yes = 1 No = 0		1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (answer YES if there is a TMDL for the basin in which the unit is found)?		
Yes = 2 No = 0		2
Total for D 3		3
Rating of Value If score is: <u>X 2-4 = H</u> <u>1 = M</u> <u>0 = L</u> Record the rating on the first page		

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS

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

D 4.0. Does the site have the potential to reduce flooding and erosion? 2

D 4.1. Characteristics of surface water outflows from the wetland:

- Wetland is a depression or flat depression with no surface water leaving it (no outlet) points = 4
- Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet points = 1
- Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch points = 0
- 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.

- 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.

- 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 3

Rating of Site Potential If score is: 12-16 = H 6-11 = M 0-5 = L Add the points in the boxes above 6

D 5.0. Does the landscape have the potential to support hydrologic functions of the site? Record the rating on the first page

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0 0

D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0 1

D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0 0

Total for D 5 1

Rating of Landscape Potential If score is: 3 = H 1 or 2 = M 0 = L Add the points in the boxes above 1

D 6.0. Are the hydrologic functions provided by the site valuable to society? Record the rating on the first page

D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions at the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.

- The wetland captures surface water that would otherwise flow down-gradient into areas where flood-damaged human or natural resources (e.g., houses or salmon redds): points = 2
- Flooding occurs in a sub-basin that is immediately down-gradient of unit points = 1
- Surface flooding problems are in a sub-basin farther down-gradient. points = 1
- Flooding from groundwater is an issue in the sub-basin. points = 0
- 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 = 1 No = 0 0

Total for D 6 1

Rating of Value If score is: 2-4 = H 1 = M 0 = L Add the points in the boxes above 1

Pages 7-12 intentionally omitted

Wetland name or number A

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

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

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

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

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

1

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
- Seasonally flooded or inundated
- Occasionally flooded or inundated
- Saturated only
- Permanently flowing stream or river in, or adjacent to, the wetland
- Seasonally flowing stream in, or adjacent to, the wetland
- Lake Fringe wetland
- Freshwater tidal wetland

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

2 points
 2 points

1

H 1.3. Richness of plant species

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

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

- If you counted: > 19 species
 5 - 19 species ✓
 < 5 species

points = 2
 points = 1
 points = 0

1

H 1.4. Interspersion of habitats

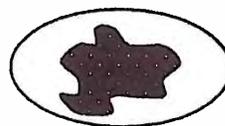
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*



None = 0 points



Low = 1 point

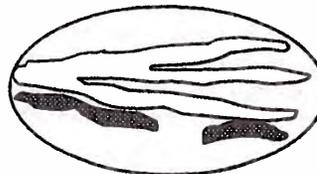
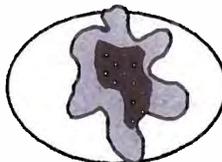
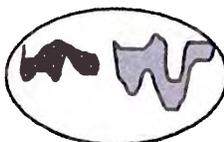


Moderate = 2 points



2

All three diagrams in this row are HIGH = 3 points



Wetland name or number A

<p>H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i> <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input checked="" type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <input checked="" type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>) <input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>	3
Add the points in the boxes above	8
Total for H 1	

Rating of Site Potential If score is: 15-18 = H 8-14 = M 0-6 = L Record the rating on the first page

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>	
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). Calculate: % undisturbed habitat $\frac{10}{2} + \{(\% \text{ moderate and low intensity land uses})/2\} = \frac{11}{2} = 11\%$ 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 <input checked="" type="checkbox"/> points = 1 < 10% of 1 km Polygon points = 0</p>	1
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: % undisturbed habitat $\frac{10}{2} + \{(\% \text{ moderate and low intensity land uses})/2\} = \frac{11}{2} = 11\%$ 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 <input checked="" type="checkbox"/> points = 1 Undisturbed habitat < 10% of 1 km Polygon points = 0</p>	1
<p>H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1 km Polygon is high intensity points = 0</p>	-2
Add the points in the boxes above	
Total for H 2	

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

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>	
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i> Site meets ANY of the following criteria: points = 2 <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats (listed on next page) within 100 m <input checked="" type="checkbox"/> points = 1 Site does not meet any of the criteria above points = 0</p>	1

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

Wetland name or number A

WDFW Priority Habitats

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

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

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

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

Wetland name or number A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<p><i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i></p>	
<p>SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to SC 1.1 No = Not an estuarine wetland</p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2</p>	<p>Cat. I</p>
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or 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</p>	<p>Cat. I Cat. II</p>
<p>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 a 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 go to SC 2.4 No = Not a 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 a WHCV</p>	<p>Cat. I</p>
<p>SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes – Go to SC 3.3 No – Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes – Go to SC 3.3 No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No – Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog</p>	<p>Cat. I</p>

Wetland name or number A

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> — Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). <p>Yes = Category I No = Not a forested wetland for this section</p>	<p>Cat. I</p>
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) <p>Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p>	<p>Cat. I</p>
<p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). — At least ¼ 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 ft²) <p>Yes = Category I No = Category II</p>	<p>Cat. II</p>
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 <p>Yes – Go to SC 6.1 No = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV</p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p>Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>NA</p>



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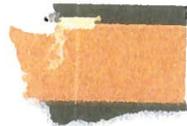
Cleanup & Spills

Water Quality Improvement Projects (TMDLs)

[Water Quality Improvement](#) > [Water Quality Improvement Projects by County](#) > Skagit County

Skagit County projects

The following table lists overview information and links to specific water quality improvement projects (including total maximum daily loads, or TMDLs) for this county. Please use links (where available) for more information on a project.



To get additional information about the water bodies in Skagit County please use the [Water Quality Assessment Query Tool](#).

WRIAs in Skagit County

- [WRIA 1](#) - Nooksack
- [WRIA 3](#) - Lower Skagit-Samish
- [WRIA 4](#) - Upper Skagit
- [WRIA 5](#) - Stillaguamish

Water-body Name	Pollutants	Status	TMDL Leads
Campbell Lake	Total Phosphorus	EPA approved	Tricia Shoblom 425-649-7288
Erie Lake	Total Phosphorus	EPA approved	Tricia Shoblom 425-649-7288
Padilla Bay	Fecal Coliform	Under development	Danielle DeVoe 425-649-7036
Samish Watershed	Fecal Coliform	EPA approved Has an implementation plan	Danielle DeVoe 425-649-7036
Skagit Basin	Fecal Coliform	EPA approved Has an implementation plan	Danielle DeVoe 425-649-7036
Stillaguamish River	Temperature Arsenic Dissolved Oxygen Fecal Coliform Mercury pH Temperature	EPA approved Has an implementation plan	Ralph Svrcek 425-649-7165



last updated September 2015

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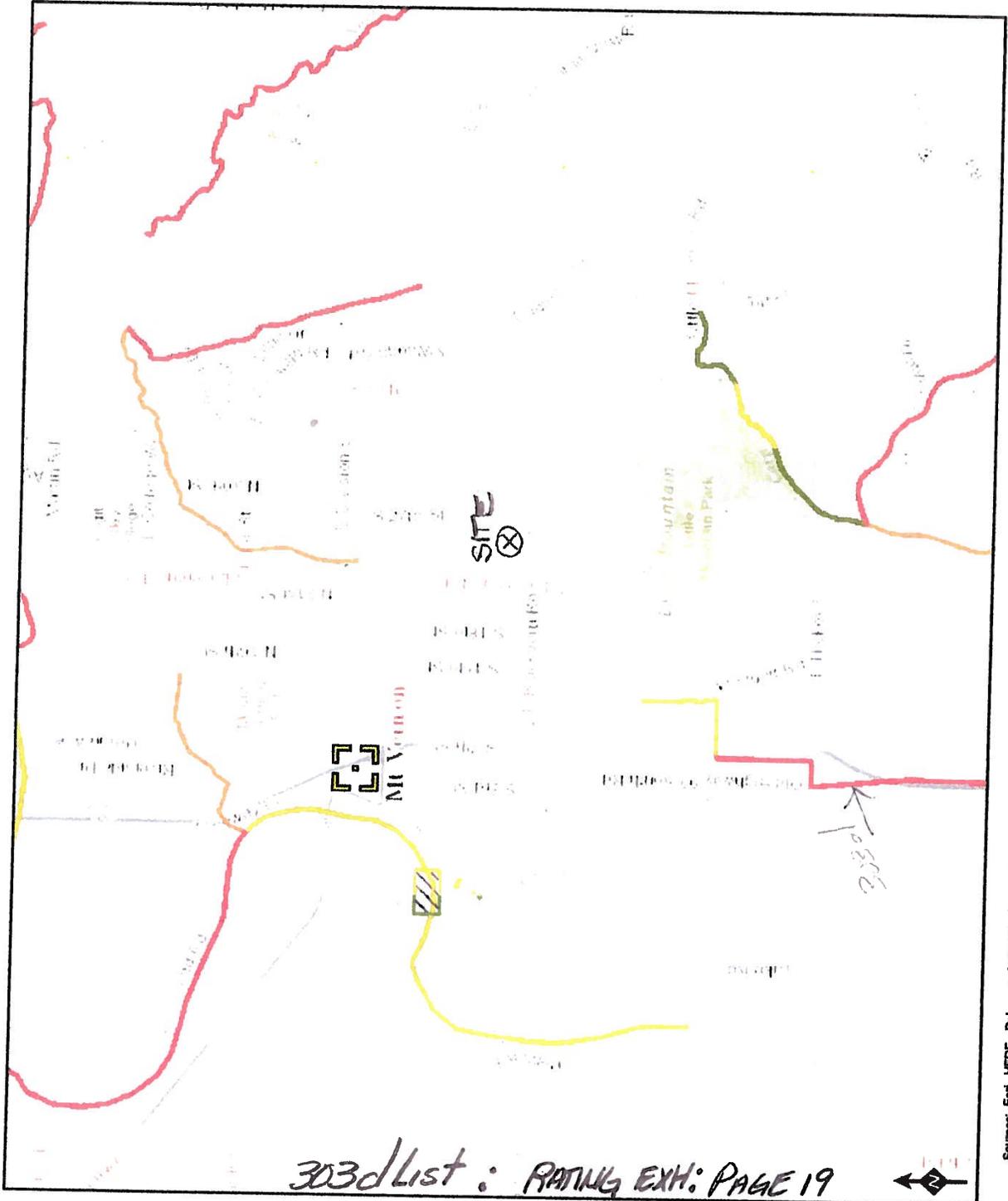
[Accessibility](#)



TMDL-LIST
RATING-PAGE 18

December 16, 2016

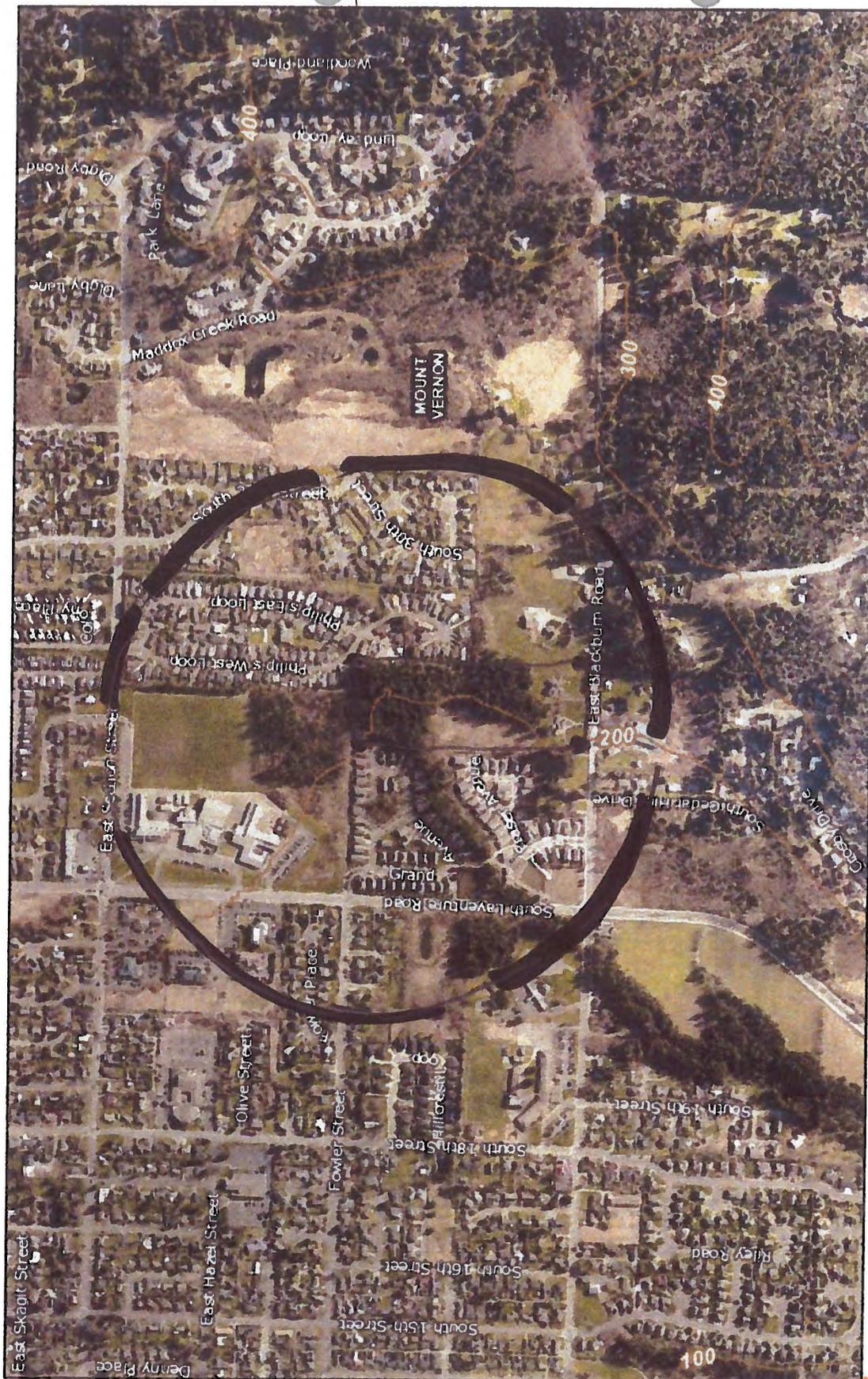
Water Quality Atlas Map



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, UGGIS, FAO, NPS, NRCAN, Geobase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, MapmyIndia, ©



303d list : RATING EXH: PAGE 19



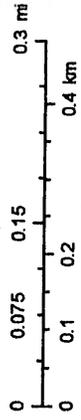
August 18, 2016

Legend

- County Boundary
- City Names
- Road Labels
- Hydro Labels
- Regional Labels
- 500 foot contours
- 100 foot contours

46 □ per 1/4 poly
x4 184 □ per poly

1" = 500 FT



Data Accuracy Warning: All GIS data was created from a verifiable public records and existing map sources. Map features have been adjusted to achieve a best-fit registration. While great care was taken in this process, maps from different sources rarely agree as to the precise location of geographic features. Map discrepancies can be as great as 300 feet.

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RATING EXHIBIT - PAGE 71



Applicant: Dave Prutzman
Site Address: 2437 Blackburn
Mount Vernon, WA 98237

Proposed East Village Short Plat
Flow Vector Map

Wetland name or number B 220 sf: size

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Pruittman - E. Village S.P. Date of site visit: May/June 2009
Jan. & April 2010
 Rated by Pat Bunting PWS - GBA Trained by Ecology? Yes No Date of training 9-30-2014
 HGM Class used for rating Depressional Wetland has multiple HGM classes? Y N

NOTE: Form is not complete without the figures requested (figures can be combined).
 Source of base aerial photo/map map - sk. Co. GIS

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

1. Category of wetland based on FUNCTIONS

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	H M (L)	H M (L)	H M (L)	
Landscape Potential	H (M) L	H (M) L	H M (L)	
Value	(H) M L	H (M) L	H (M) L	TOTAL
Score Based on Ratings	6	5	4	15

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

- 9 = H,H,H
- 8 = H,H,M
- 7 = H,H,L
- 7 = H,M,M
- 6 = H,M,L
- 6 = M,M,M
- 5 = H,L,L
- 5 = M,M,L
- 4 = M,L,L
- 3 = L,L,L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	NA

Wetland name or number B

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

All exhibits are attached to WETA Rating as pages 18-21

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (<i>can be added to another figure</i>)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
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 (<i>can be added to figure above</i>)	S 4.1	
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	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 B

HGM Classification of Wetlands in Western Washington

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

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

NO - go to 2

YES - the wetland class is Tidal Fringe - go to 1.1

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

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

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

NO - go to 3

YES - The wetland class is Flats

If your wetland can be classified as a Flats wetland, use the form for Depressional wetlands.

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

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

NO - go to 4

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

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

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

NO - go to 5

YES - The wetland class is Slope

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

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

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

Wetland name or number B

NO - go to 6

YES - The wetland class is **Riverine**

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

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

NO - go to 7

YES - The wetland class is **Depressional**

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

NO - go to 8

YES - The wetland class is **Depressional**

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

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

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

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

Wetland name or number B

DEPRESSIONAL AND FLATS WETLANDS	
Water Quality Functions - Indicators that the site functions to improve water quality	
D 1.0. Does the site have the potential to improve water quality?	
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. Wetland has an unconstricted, or slightly constricted, surface outlet that is ^{seasonal} permanently flowing Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.	points = 3 points = 2 points = 1 ✓ 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 Wetland has persistent, ungrazed, plants > 1/2 of area Wetland has persistent, ungrazed plants > 1/10 of area Wetland has persistent, ungrazed plants < 1/10 of area	points = 5 points = 3 ✓ points = 1 points = 0 3
D 1.4. Characteristics of seasonal ponding or inundation: <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > 1/2 total area of wetland Area seasonally ponded is > 1/4 total area of wetland Area seasonally ponded is < 1/4 total area of wetland	points = 4 points = 2 points = 0 ✓ 0
Total for D 1	Add the points in the boxes above 4

Rating of Site Potential If score is: 12-16 = H 6-11 = M X 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 _____	Yes = 1 No = 0 ✓ 0
Total for D 2	Add the points in the boxes above 1

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

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

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

Wetland name or number B

DEPRESSIONAL AND FLATS WETLANDS		
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation		
D 4.0. Does the site have the potential to reduce flooding and erosion?		
D 4.1. Characteristics of surface water outflows from the wetland:		
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	
Wetland has an intermittently flowing stream 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	0
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.		
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 ✓	0
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.		
The area of the basin is less than 10 times the area of the unit	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 ✓	0
Entire wetland is in the Flats class	points = 5	
Total for D 4	Add the points in the boxes above	0

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

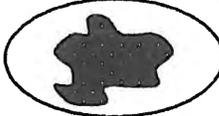
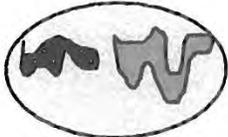
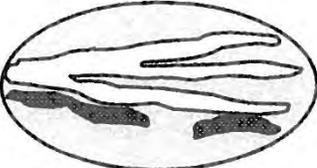
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?		
D 5.1. Does the wetland receive stormwater discharges?	Yes = 1 No = 0 ✓	0
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0 ✓	1
D 5.3. Is more than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

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

D 6.0. Are the hydrologic functions provided by the site valuable to society?		
D 6.1. The unit is in a landscape that has flooding problems. Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.		
The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds):		
• Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	
• Surface flooding problems are in a sub-basin farther down-gradient.	points = 1 ✓	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
Total for D 6	Add the points in the boxes above	1

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

Wetland name or number B

These questions apply to wetlands of all HGM classes.	
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
<p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i></p> <p> <input type="checkbox"/> Aquatic bed 4 structures or more: points = 4 <input checked="" type="checkbox"/> Emergent 3 structures: points = 2 <input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 ✓ <input type="checkbox"/> Forested (areas where trees have > 30% cover) 1 structure: points = 0 </p> <p><i>If the unit has a Forested class, check if:</i></p> <p> <input type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon </p>	1
<p>H 1.2. Hydroperiods</p> <p>Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).</p> <p> <input type="checkbox"/> Permanently flooded or inundated 4 or more types present: points = 3 <input type="checkbox"/> Seasonally flooded or inundated 3 types present: points = 2 <input type="checkbox"/> Occasionally flooded or inundated 2 types present: points = 1 <input checked="" type="checkbox"/> Saturated only 1 type present: points = 0 ✓ </p> <p> <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake Fringe wetland 2 points <input type="checkbox"/> Freshwater tidal wetland 2 points </p>	0
<p>H 1.3. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft². <i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i></p> <p>If you counted: > 19 species points = 2 5 - 19 species ✓ points = 1 ✓ < 5 species points = 0 </p>	1
<p>H 1.4. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p>All three diagrams in this row are HIGH = 3points</p>	1

Wetland name or number B

<p>H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i> <input type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long). <input type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) <input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <input type="checkbox"/> At least 1/4 ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>) <input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>		1
<p>Total for H 1 Add the points in the boxes above</p>		4

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

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>		
<p>H 2.1. Accessible habitat (include only habitat that directly abuts wetland unit). Calculate: % undisturbed habitat $10 + [(\% \text{ moderate and low intensity land uses})/2]$ <u>5</u> = <u>15</u> % If total accessible habitat is: <u>19</u> Δ of <u>104</u> = <u>10%</u> <u>10/100</u> > 1/3 (33.3%) of 1 km Polygon points = 3 20-33% of 1 km Polygon points = 2 10-19% of 1 km Polygon <input checked="" type="checkbox"/> points = 1 ✓ <u>1</u> < 10% of 1 km Polygon points = 0</p>		
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: % undisturbed habitat $10 + [(\% \text{ moderate and low intensity land uses})/2]$ <u>5</u> = <u>15</u> % 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 <input checked="" type="checkbox"/> points = 1 ✓ <u>1</u> Undisturbed habitat < 10% of 1 km Polygon points = 0</p>		
<p>H 2.3. Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (- 2) ✓ <u>-2</u> ≤ 50% of 1 km Polygon is high intensity points = 0</p>		
<p>Total for H 2 Add the points in the boxes above</p>		0

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

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>	
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? Choose only the highest score that applies to the wetland being rated. Site meets ANY of the following criteria: points = 2 <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan <input checked="" type="checkbox"/> Site has 1 or 2 priority habitats (listed on next page) within 100 m <input checked="" type="checkbox"/> points = 1 ✓ <u>1</u> Site does not meet any of the criteria above points = 0</p>	

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

Wetland name or number B

WDFW Priority Habitats

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

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

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

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

Wetland name or number B

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<p>SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes - Go to SC 1.1 No = Not an estuarine wetland</p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2</p>	Cat. I
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or 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</p>	Cat. I Cat. II
<p>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 a 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/wnhp/wetlands.pdf Yes - Contact WNHP/WDNR and go to SC 2.4 No = Not a 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 a WHCV</p>	Cat. I
<p>SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i> SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? Yes - Go to SC 3.3 No - Go to SC 3.2 SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes - Go to SC 3.3 No = Is not a bog SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4? Yes = Is a Category I bog No - Go to SC 3.4 NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog. SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog</p>	Cat. I

Wetland name or number B

<p>SC 4.0. Forested Wetlands</p> <p>Does the wetland have at least <u>1 contiguous acre</u> of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? <i>If you answer YES you will still need to rate the wetland based on its functions.</i></p> <ul style="list-style-type: none"> — Old-growth forests (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more. — Mature forests (west of the Cascade Crest): Stands where the largest trees are 80- 200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm). <p>Yes = Category I No = Not a forested wetland for this section</p>	<p>Cat. I</p>
<p>SC 5.0. Wetlands in Coastal Lagoons</p> <p>Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?</p> <ul style="list-style-type: none"> — The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks — The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (<i>needs to be measured near the bottom</i>) <p>Yes – Go to SC 5.1 No = Not a wetland in a coastal lagoon</p> <p>SC 5.1. Does the wetland meet all of the following three conditions?</p> <ul style="list-style-type: none"> — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100). — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland. — The wetland is larger than 1/10 ac (4350 ft²) <p>Yes = Category I No = Category II</p>	<p>Cat. I</p> <p>Cat. II</p>
<p>SC 6.0. Interdunal Wetlands</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? <i>If you answer yes you will still need to rate the wetland based on its habitat functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> — Long Beach Peninsula: Lands west of SR 103 — Grayland-Westport: Lands west of SR 105 — Ocean Shores-Copalis: Lands west of SR 115 and SR 109 <p>Yes – Go to SC 6.1 No = not an interdunal wetland for rating</p> <p>SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)? Yes = Category I No – Go to SC 6.2</p> <p>SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger? Yes = Category II No – Go to SC 6.3</p> <p>SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac? Yes = Category III No = Category IV</p>	<p>Cat I</p> <p>Cat. II</p> <p>Cat. III</p> <p>Cat. IV</p>
<p>Category of wetland based on Special Characteristics If you answered No for all types, enter "Not Applicable" on Summary Form</p>	<p>NA</p>

Wetland name or number C

10,000 sf.

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Putzman, Dave P. Date of site visit: 1-23-16
4-7-16
 Rated by Pat Bunting, PWS, GBA Trained by Ecology? Yes ___ No Date of training ___
 HGM Class used for rating Depressional Wetland has multiple HGM classes? ___ Y N

NOTE: Form is not complete without the figures requested (figures can be combined).
 Source of base aerial photo/map Sk. Co. GIS Map

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

1. Category of wetland based on FUNCTIONS

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

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
Circle the appropriate ratings				
Site Potential	H <u>M</u> L	H M <u>L</u>	H M <u>L</u>	
Landscape Potential	H <u>M</u> L	H <u>M</u> L	H M <u>L</u>	
Value	<u>H</u> M L	H <u>M</u> L	H <u>M</u> L	TOTAL
Score Based on Ratings	7	6	4	17

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY
Estuarine	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	NA

Wetland name or number C

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

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

Riverine Wetlands

all exhibits are attached to WETA. Rating as pages 18-21

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

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

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (can be added to figure above)	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number

HGM Classification of Wetlands in Western Washington

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

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

NO - go to 2

YES - the wetland class is **Tidal Fringe** - go to 1.1

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

NO - **Saltwater Tidal Fringe (Estuarine)**

YES - **Freshwater Tidal Fringe**

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

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

NO - go to 3

YES - The wetland class is **Flats**

If your wetland can be classified as a Flats wetland, use the form for Depressional wetlands.

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

The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;

At least 30% of the open water area is deeper than 6.6 ft (2 m).

NO - go to 4

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

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

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

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

The water leaves the wetland **without being impounded**.

NO - go to 5

YES - The wetland class is **Slope**

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

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

The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

The overbank flooding occurs at least once every 2 years.

Wetland name or number C

NO - go to 6

YES - The wetland class is **Riverine**

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

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

NO - go to 7

YES - The wetland class is **Depressional**

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

NO - go to 8

YES - The wetland class is **Depressional**

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

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

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

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

Wetland name or number C

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 ✓		1	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 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 ✓			
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 ✓		5	
Wetland has persistent, ungrazed, plants > 1/2 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			
D 1.4. Characteristics of seasonal ponding or inundation:			
<i>This is the area that is ponded for at least 2 months. See description in manual.</i>			
Area seasonally ponded is > 1/2 total area of wetland points = 4		0	
Area seasonally ponded is > 1/4 total area of wetland points = 2 ✓			
Area seasonally ponded is < 1/4 total area of wetland points = 0			
Total for D 1		Add the points in the boxes above	6

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

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

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

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

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

1218131 / 10,000 SF = 121
 Basin out
 1:121 Ratio

Wetland name or number C

DEPRESSIONAL AND FLATS WETLANDS	
Hydrologic Functions - Indicators that the site functions to reduce flooding and stream degradation	
D 4.0. Does the site have the potential to reduce flooding and erosion?	
D 4.1. Characteristics of surface water outflows from the wetland:	
Wetland is a depression or flat depression with no surface water leaving it (no outlet) 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	0
D 4.2. Depth of storage during wet periods: Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.	
Marks of ponding are 3 ft or more above the surface or bottom of outlet 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	0
D 4.3. Contribution of the wetland to storage in the watershed: Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.	
The area of the basin is less than 10 times the area of the unit 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	0
Entire wetland is in the Flats class points = 5	
Total for D 4	0

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

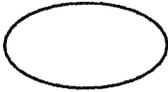
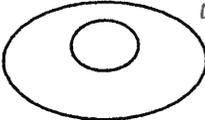
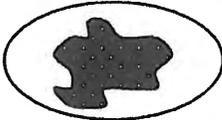
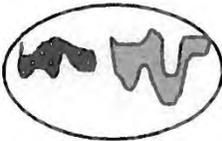
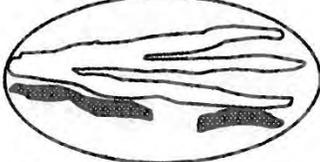
D 5.0. Does the landscape have the potential to support hydrologic functions of the site?	
D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	1
D 5.2. Is >10% of the area within 150 ft of the wetland in land uses that generate excess runoff? Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses (residential at >1 residence/ac, urban, commercial, agriculture, etc.)? Yes = 1 No = 0	1
Total for D 5	3

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.	
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	1
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
Total for D 6	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 C

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that site functions to provide important habitat	
H 1.0. Does the site have the potential to provide habitat?	
<p>H 1.1. Structure of plant community: <i>Indicators are Cowardin classes and strata within the Forested class. Check the Cowardin plant classes in the wetland. Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.</i></p> <p> <input type="checkbox"/> Aquatic bed 4 structures or more: points = 4 <input type="checkbox"/> Emergent 3 structures: points = 2 <input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 <input type="checkbox"/> Forested (areas where trees have > 30% cover) 1 structure: points = 0 ✓ 0 <i>If the unit has a Forested class, check if:</i> <input type="checkbox"/> The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon </p>	
<p>H 1.2. Hydroperiods</p> <p>Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (<i>see text for descriptions of hydroperiods</i>).</p> <p> <input type="checkbox"/> Permanently flooded or inundated 4 or more types present: points = 3 <input type="checkbox"/> Seasonally flooded or inundated 3 types present: points = 2 <input type="checkbox"/> Occasionally flooded or inundated 2 types present: points = 1 <input checked="" type="checkbox"/> Saturated only 1 type present: points = 0 ✓ 0 <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake Fringe wetland 2 points <input type="checkbox"/> Freshwater tidal wetland 2 points </p>	
<p>H 1.3. Richness of plant species</p> <p>Count the number of plant species in the wetland that cover at least 10 ft². <i>Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</i></p> <p>If you counted: > 19 species points = 2 5 - 19 species points = 1 ✓ 1 < 5 species points = 0 </p>	
<p>H 1.4. Interspersion of habitats</p> <p>Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  ✓ <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-top: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p>All three diagrams in this row are HIGH = 3points</p>	1

Wetland name or number C

<p>H 1.5. Special habitat features:</p> <p>Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <p><input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><input checked="" type="checkbox"/> Standing snags (dbh > 4 in) within the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>)</p> <p><input type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata</i>)</p>		2
Total for H 1	Add the points in the boxes above	4

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

<p>H 2.0. Does the landscape have the potential to support the habitat functions of the site?</p>		
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p>Calculate: % undisturbed habitat $\frac{12}{10} + [(\% \text{ moderate and low intensity land uses})/2]$ <u>5</u> = <u>15</u> %</p> <p>If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon <input checked="" type="checkbox"/> points = 1 ✓ 1</p> <p>< 10% of 1 km Polygon points = 0</p>		
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland.</p> <p>Calculate: % undisturbed habitat $\frac{10}{10} + [(\% \text{ moderate and low intensity land uses})/2]$ <u>5</u> = <u>15</u> %</p> <p>Undisturbed habitat > 50% of Polygon points = 3</p> <p>Undisturbed habitat 10-50% and in 1-3 patches points = 2</p> <p>Undisturbed habitat 10-50% and > 3 patches <input checked="" type="checkbox"/> points = 1 ✓ 1</p> <p>Undisturbed habitat < 10% of 1 km Polygon points = 0</p>		
<p>H 2.3. Land use Intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (-2) ✓ -2</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>		
Total for H 2	Add the points in the boxes above	0

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

<p>H 3.0. Is the habitat provided by the site valuable to society?</p>	
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p> <p>Site meets ANY of the following criteria: points = 2</p> <ul style="list-style-type: none"> <input type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan <p>Site has 1 or 2 priority habitats (listed on next page) within 100 m <input checked="" type="checkbox"/> points = 1 ✓ 1</p> <p>Site does not meet any of the criteria above points = 0</p>	

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

Wetland name or number C

WDFW Priority Habitats

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

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

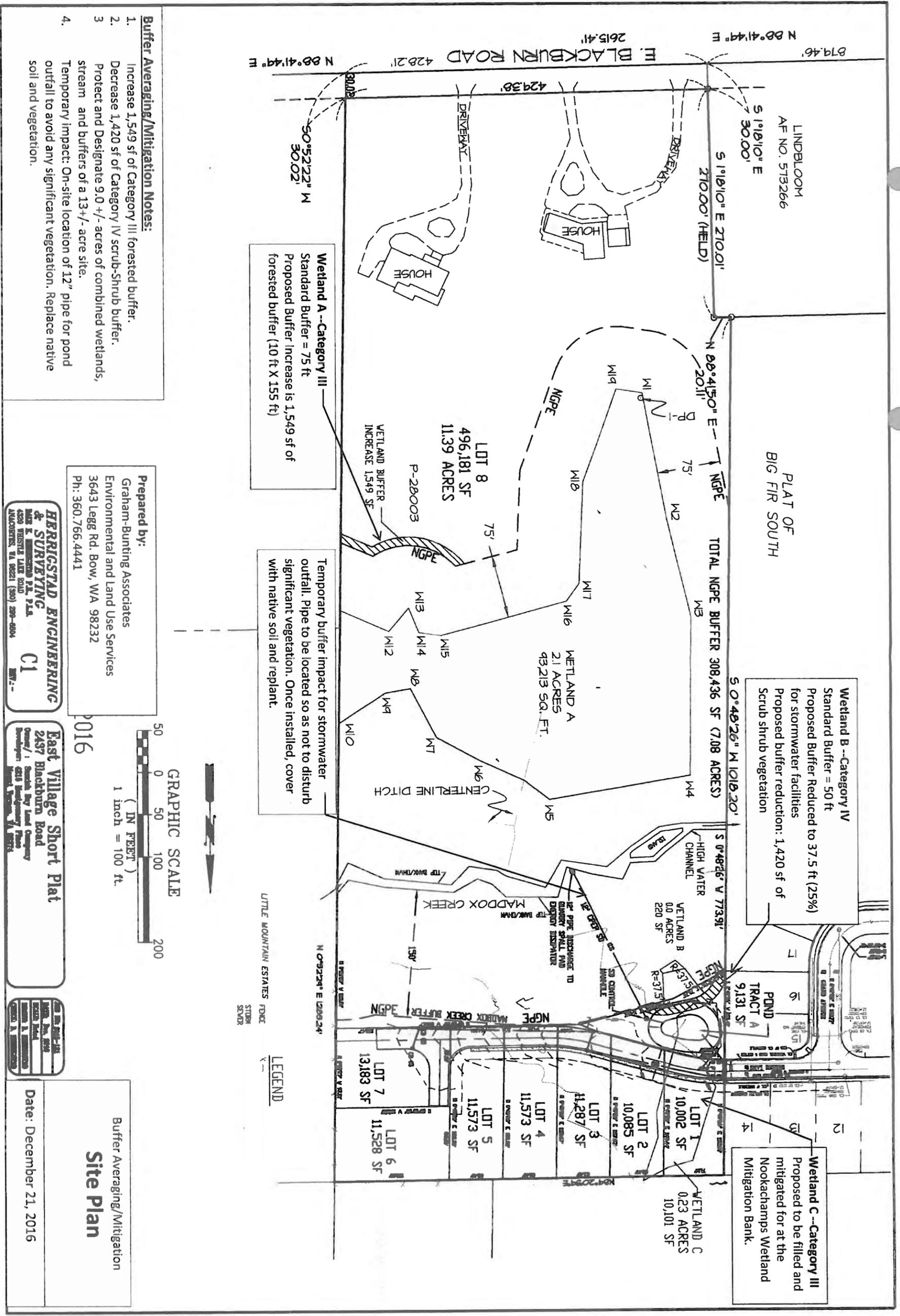
- **Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- **Herbaceous Balds:** Variable size patches of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

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

Wetland name or number C

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<p>SC 1.0. Estuarine wetlands Does the wetland meet the following criteria for Estuarine wetlands? — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt Yes – Go to SC 1.1 No = Not an estuarine wetland</p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? Yes = Category I No - Go to SC 1.2</p>	<p>Cat. I</p>
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. (If non-native species are <i>Spartina</i>, see page 25) — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or 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</p>	<p>Cat. I Cat. II</p>
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p>	
<p>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</p>	<p>Cat. I</p>
<p>SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? Yes = Category I No = Not a WHCV</p>	
<p>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 go to SC 2.4 No = Not a WHCV</p>	
<p>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 a WHCV</p>	
<p>SC 3.0. Bogs</p>	
<p>Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES you will still need to rate the wetland based on its functions.</i></p>	
<p>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</p>	
<p>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</p>	
<p>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.</p>	<p>Cat. I</p>
<p>SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy? Yes = Is a Category I bog No = Is not a bog</p>	



PLAT OF
BIG FIR SOUTH

Wetland B --Category IV
Standard Buffer = 50 ft
Proposed Buffer Reduced to 37.5 ft (25%)
for stormwater facilities
Proposed buffer reduction: 1,420 sf of
Scrub shrub vegetation

Wetland C --Category III
Proposed to be filled and
mitigated for at the
Nookachamps Wetland
Mitigation Bank.

Wetland A --Category III
Standard Buffer = 75 ft
Proposed Buffer Increase is 1,549 sf of
forested buffer (10 ft X 155 ft)

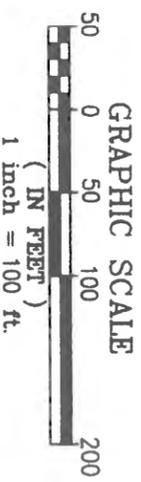
Temporary buffer impact for stormwater
outfall. Pipe to be located so as not to disturb
significant vegetation. Once installed, cover
with native soil and replant.

- Buffer Averaging/Mitigation Notes:**
1. Increase 1,549 sf of Category III forested buffer.
 2. Decrease 1,420 sf of Category IV scrub-Shrub buffer.
 3. Protect and Designate 9.0 +/- acres of combined wetlands, stream and buffers of a 13+/- acre site.
 4. Temporary impact: On-site location of 12" pipe for pond outfall to avoid any significant vegetation. Replace native soil and vegetation.

Prepared by:
Graham-Bunting Associates
Environmental and Land Use Services
3643 Legg Rd. Bow, WA 98232
Ph: 360.766.4441

**HERRIGSTAD ENGINEERING
& SURVEYING**
C1

East Village Short Plat
2437 Blackburn Road
Bow, WA 98232



LEGEND

- UTLITTLE MOUNTAIN ESTATES FENCE
- STORM SEWER

Buffer Averaging/Mitigation
Site Plan

Date: December 21, 2016



SEPA ENVIRONMENTAL CHECKLIST

16-150

RECEIVED
CITY OF MOUNT VERNON

DEC 29 2016

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants: [\[help\]](#)

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements -that do not contribute meaningfully to the analysis of the proposal.

A. BACKGROUND

1. Name of proposed project, if applicable: **East Village Short Plat**
2. Name of applicant: **Samish Bay Land Company LLC**
3. Address and phone number of applicant and contact person: **David Prutzman, 4703 Parkview Lane, Mount Vernon, Wa. 98274**
4. Date checklist prepared: **12/21/2016**
5. Agency requesting checklist: **City of Mount Vernon**

6. Proposed timing or schedule (including phasing, if applicable): **Construction Summer 2017**
7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. **None at present, however, the south portions of lot 9 may be considered for development in the years ahead.**
8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. **See attached Wetland, Critical Area, and Mitigation Report, DAHP archeological survey**
9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. **No**
10. List any government approvals or permits that will be needed for your proposal, if known. **Short Plat approval, Clear and Grade permit, Construction permit**
11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) **Short plat of a 13+ acre site located at 2437 East Blackburn Road as follows: 1) the northerly 2.2 acres into (7) residential lots; 2) a storm water tract serving the above referenced lots (the 7 lots plus the storm water tract will all be sited north of the identified critical area buffer); the residual acre tract located south of Maddox Creek will be the 9th lot/tract.**
12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. **2437 East Blackburn Road, lying immediately adjacent on the East to Big Fir North and Big Fir South. See attached maps, legal description.**

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other: **Gently sloped.**
- b. What is the steepest slope on the site (approximate percent slope)? **3%**
- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. **See attached Critical Areas report.**
- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. **No**
- e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. **The road and sidewalk area is 14,300 square feet with 12" of cut would create 530 cubic yards. The pond excavation will be around 750 cubic yards. Total excavation of approximately 1,300 cubic yards. We will bring in 8" of gravel borrow for road base or 320 cubic yards, then 3" crushed road grading for 121 cubic yards.**
- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. **Possible during high rain event.**
- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? **25%**
- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: **Temporary erosion control, water quality, retention of buffer areas and trees within buffer areas, wetland mitigation via wetland banking (see attached report)**

2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. **Vehicle emissions during construction**
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. **No.**
- c. Proposed measures to reduce or control emissions or other impacts to air, if any: **Construction equipment will be maintained to appropriate levels to minimize emissions.**

3. Water

- a. Surface Water:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. **Maddox Creek. See attached Critical Areas and wetland reports.**

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. **Yes, however, all work will be outside of the required 150' Critical Area Buffer. See attached map.**

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. **Wetlands will be affected and mitigated via wetland banking. See attached map.**

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. **No.**

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. **No.**

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. **Surface water (not waste) will be retained and treated before release to Maddox Creek.**

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. **No.**

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. **None.**

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. **Surface water runoff will be generated from roofs, driveways and impervious development improvements. Water will be retained, treated and released via its natural drainage course and surface water spreader bar with sheeting action to Maddox Creek.**

2) Could waste materials enter ground or surface waters? If so, generally describe. **No.**

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. **No.**

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: **Surface water will be contained and routed to a storm water facility for containment, treatment, and release to Maddox Creek via sheeting action from a surface water spreader.**

4. Plants

a. Check the types of vegetation found on the site:

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- grass
- pasture
- crop or grain
- Orchards, vineyards or other permanent crops.
- wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

b. What kind and amount of vegetation will be removed or altered? **Trees within rights of way, lot building envelopes and related under growth will be removed.**

c. List threatened and endangered species known to be on or near the site. **None**

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: **Retention of forested 150' Critical Area buffer; residential landscaping of trees, shrubs, grasses and mulches.**

e. List all noxious weeds and invasive species known to be on or near the site. **None.**

5. Animals

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:

birds: **hawk**, heron, eagle, **songbirds**, other:
mammals: **deer**, bear, elk, beaver, other:

fish: bass, salmon, trout, herring, shellfish, other _____

- b. List any threatened and endangered species known to be on or near the site. **None.**
- c. Is the site part of a migration route? If so, explain. **No**
- d. Proposed measures to preserve or enhance wildlife, if any: **Retention of forested Critical Area buffer.**
- e. List any invasive animal species known to be on or near the site. **None.**

6. Energy and natural resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. **Electric and natural gas will be used for heating, cooking and lighting**
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. **No**
- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: **high efficiency natural gas and insulation.**

7. Environmental health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. **No.**
 - 1) Describe any known or possible contamination at the site from present or past uses. **None**
 - 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity. **None**
 - 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project. **None**
 - 4) Describe special emergency services that might be required. **None**
 - 5) Proposed measures to reduce or control environmental health hazards, if any: **None**

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? **None**

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. **Traffic, construction operation. 7:00 a.m.-6:00 p.m.**

- 3) Proposed measures to reduce or control noise impacts, if any: **Hours of Operation.**

8. Land and shoreline use

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. **Site is vacant, forested land with 2 existing homes on south 300 feet. Adjacent uses are mobile home park to North East, residential subdivisions to the West, and school site to the North.**

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? **None.**
 - 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: **No.**

- c. Describe any structures on the site. **2 existing homes on the South 300 feet.**

- d. Will any structures be demolished? If so, what? **No.**

- e. What is the current zoning classification of the site? **R-1,4.0**

- f. What is the current comprehensive plan designation of the site? **Medium Density Residential**

- g. If applicable, what is the current shoreline master program designation of the site? **N/A**

- h. Has any part of the site been classified as a critical area by the city or county? If so, specify. **Yes, areas immediately adjacent to Maddox Creek.**

- i. Approximately how many people would reside or work in the completed project? **15-18**

- j. Approximately how many people would the completed project displace? **None**

- k. Proposed measures to avoid or reduce displacement impacts, if any: **N/A**

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: **Medium density single family homes consistent with existing and proposed land uses.**

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any: **N/A**

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. **7 Upper/Middle priced homes.**

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. **None.**

c. Proposed measures to reduce or control housing impacts, if any: **None.**

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? **35 feet; wood, cement plank siding.**

b. What views in the immediate vicinity would be altered or obstructed? **None.**

c. Proposed measures to reduce or control aesthetic impacts, if any: **Critical Area buffer retained, aligning street improvements with those of the adjacent Big Fir North, use of curve-a-linear street design to soften density, street trees, CCR's controlling landscaping.**

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? **Light from homes, streetlights.**

b. Could light or glare from the finished project be a safety hazard or interfere with views? **No.**

c. What existing off-site sources of light or glare may affect your proposal? **None.**

d. Proposed measures to reduce or control light and glare impacts, if any: **None.**

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity? **Little Mountain Trail, Hillcrest Park, school playfields.**

- b. Would the proposed project displace any existing recreational uses? If so, describe. **No.**
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: **None.**

13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe. **There are no buildings, structures or sites identified on the WISSARD at the DAHP web site in the vicinity of this project, however, based upon historic maps DAHP will request a professional archeological survey for the project site prior to development (see attached email).**
- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. **No evidence to date show Indian or historic use or occupation.**
- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. **EZ1 request submitted to DAHP.**
- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. **Should archaeological materials (e.g. bones, shell, stone tools, beads, ceramics, old bottles, hearths, etc.) or human remains be observed during project activities, all work in the immediate vicinity should stop. The State Department of Archaeology and Historic Preservation (360-586-3065), the County/City planning office, the affected Tribe(s) and the county coroner (if applicable) should be contacted immediately in order to help assess the situation and determine how to preserve the resource(s). Compliance with all applicable laws pertaining to archaeological resources (RCW27.53, 27.44 and WAC 25-48) is required. Failure to comply with this requirement could constitute a Class C Felony.**

14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. **Internal street will**

be a private street system connecting to the City street system via extension of Balsam Lane.

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? **Yes, on LaVenture Road approximately 900 feet from the site.**
- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? **Will create 14-21 additional parking spaces and will eliminate none.**
- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). **Project will add approximately 350 feet of private street.**
- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. **No.**
- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? **Project will generate estimated 67 vehicular trips per day based upon ITE Trip Generation Manual. A.M. peak hours (7a.m.-9a.m.) will generate 15 trips and P.M. peak hours (4p.m.-6p.m.) will generate 17 trips daily.**
- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. **Forest products will be moved during clearing activities.**
- h. Proposed measures to reduce or control transportation impacts, if any: **Apply to City for allowing expanded clearing activity at time of clear/grade permit activities with the intent of consolidating the time during which movement of forest products would occur through adjacent Big Fir North residential community.**

15. Public services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. **Increased public services required for 7 new homes.**
- b. Proposed measures to reduce or control direct impacts on public services, if any. **Payment of Impact Fees.**

16. Utilities

- a. Circle utilities currently available at the site: [help] **electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,**

other: **installation of conduit for future connection to City's fiber optic system.**

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. **Electricity: PSE; Natural Gas: CNGC; Refuse: City of Mount Vernon; Telephone: Frontier; Cable: Comcast; Water: Skagit PUD #1; Sanitary Sewer: City of Mount Vernon. Construction on-site will be required for installation of utilities.**

C. SIGNATURE

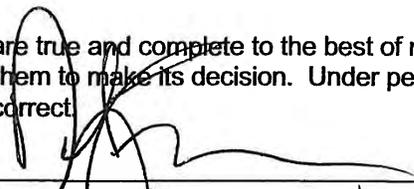
The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision. Under penalty of perjury I swear that all information provided is true and correct.

Signature: _____

Name of signee _____

Position and Agency/Organization _____

Date Submitted: _____


DAVE PRUTZMAN
JAMISH BAY LAND CO. LLC
12/27/16 Managing member

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(IT IS NOT NECESSARY to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.



Dave Prutzman <samishbay@gmail.com>

RE: EZ-1

1 message

Kaehler, Gretchen (DAHP) <Gretchen.Kaehler@dahp.wa.gov>
To: Dave Prutzman <samishbay@gmail.com>

Tue, Dec 20, 2016 at 5:29 PM

Hi Dave,

Based on the historic maps I would request a professional archaeological survey for this project area prior to development.

Best,

Gretchen

Gretchen Kaehler

Assistant State Archaeologist, Local Governments

Department of Archaeology and Historic Preservation (DAHP)

P: 360-586-3088

C: 360-628-2755

From: Dave Prutzman [mailto:samishbay@gmail.com]**Sent:** Wednesday, December 14, 2016 11:56 AM**To:** Kaehler, Gretchen (DAHP)**Subject:** EZ-1

Gretchen,

Attached is EZ-1 form for another 7 lot short plat in the City of Mount Vernon. Hoping the site has no specific problems and can get your response accordingly via email. Your help on the previous short plat we discussed a couple weeks ago proved invaluable.....the City checked and realized that they had been handling things via email prior to you review of SEPA and issuance of a letter. Thanks.

--

SUBDIVISION

16-150

Guarantee/Certificate Number:

Issued By:



CHICAGO TITLE INSURANCE COMPANY



C.E.D. DEPARTMENT

CHICAGO TITLE INSURANCE COMPANY
a corporation, herein called the Company

GUARANTEES

Samish Bay Land Company LLC

herein called the Assured, against actual loss not exceeding the liability amount stated in Schedule A which the Assured shall sustain by reason of any incorrectness in the assurances set forth in Schedule A.

LIABILITY EXCLUSIONS AND LIMITATIONS

- 1. No guarantee is given nor liability assumed with respect to the identity of any party named or referred to in Schedule A or with respect to the validity, legal effect or priority of any matter shown therein.
- 2. The Company's liability hereunder shall be limited to the amount of actual loss sustained by the Assured because of reliance upon the assurance herein set forth, but in no event shall the Company's liability exceed the liability amount set forth in Schedule A.

Please note carefully the liability exclusions and limitations and the specific assurances afforded by this guarantee. If you wish additional liability, or assurances other than as contained herein, please contact the Company for further information as to the availability and cost.

Chicago Title Company of Washington
425 Commercial
Mount Vernon, WA 98273

Countersigned By:

Krusty Jeglum

Authorized Officer or Agent



Chicago Title Insurance Company

By:

[Signature]

President

Attest:

[Signature]

Secretary

CHICAGO TITLE INSURANCE COMPANY

GUARANTEE/CERTIFICATE NO. 620026827

ISSUING OFFICE: Title Officer: Residential Unit Chicago Title Company of Washington 425 Commercial Mount Vernon, WA 98273 Phone: (877)602-2190 Fax: (866)827-8844 Main Phone: (425)258-3683 Email: snotitle@ctt.com

SCHEDULE A

Liability	Premium	Tax
\$1,000.00	\$250.00	\$21.25

Effective Date: December 14, 2016 at 08:00 AM

The assurances referred to on the face page are:

That, according to those public records which, under the recording laws, impart constructive notice of matter relative to the following described property:

For APN/Parcel ID(s): P28003 and 340428 2 007 0102

That portion of the East ½ of the Southwest ¼ of the Northwest ¼ of Section 28, Township 34 North, Range 4 East, W.M., described as follows:

Beginning at the Southeast corner of said subdivision;
 thence North 0°54'33" East along the East line of said subdivision, a distance of 30.02 feet to a point on the North line of Blackburn Road, and which point is the true point of beginning of this description;
 thence continuing North 0°54'33" East along the East line of said subdivision, a distance of 1,284.15 feet to the Northeast corner of said subdivision;
 thence South 89°22'21" West, along the North line of said subdivision, a distance of 461.22 feet to a point that bears North 89°22'21" East a distance of 194.40 feet from the Northwest corner of said subdivision;
 thence South 0°50'47" West, parallel with the West line of said subdivision, a distance of 1,019.12 feet to a point on the North line of that tract conveyed to Robert B. Lindbloom, et ux, by instrument recorded under Auditor's File No. 573266;
 thence North 88°43'35" East along the North line of said Lindbloom tract, a distance of 20.02 feet to the Northeast corner of said Lindbloom tract;
 thence South 1°16'25" East, along the East line of said Lindbloom tract, a distance of 270.00 feet to a point on the North line of Blackburn Road;
 thence North 88°43'35" East, along the North line of Blackburn Road, parallel with, and 30.00 feet North of, when measured at right angles from the South line of said subdivision, a distance of 429.95 feet to the true point of beginning.

Situate in the City of Mount Vernon, County of Skagit, State of Washington.

Title to said real property is vested in:

Mary Margaret Kiesel, as her separate estate

subject to the matters shown below under Exceptions, which Exceptions are not necessarily shown in the order of their priority.

END OF SCHEDULE A

SCHEDULE B
(continued)

SPECIAL EXCEPTIONS

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown in the public records.
3. Title to any property beyond the lines of the real property expressly described herein, or title to streets, roads, avenues, lanes, ways or waterways on which such real property abuts, or the right to maintain therein vaults, tunnels, ramps, or any other structure or improvement; or any rights or easements therein unless such property, rights or easements are expressly and specifically set forth in said description.
4. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:
 - Granted to: George W. Kiesel
 - Purpose: Facilities
 - Recording Date: May 7, 1999
 - Recording No.: 9905070051
 - Affects: Portion of said premises
5. Any rights, interests, or claims which may exist or arise by reason of the following matters disclosed by survey,
 - Recording Date: June 29, 1999
 - Recording No.: 9906290085
6. Skagit County Planning and Permit Center Findings of Fact, including the terms, covenants and provisions thereof;
 - Recording Date: April 15, 2002
 - Recording No.: 200204150181
7. Accessory Dwelling Unit, including the terms, covenants and provisions thereof;
 - Recording Date: March 19, 2004
 - Recording No.: 200403190090
8. Any rights, interests, or claims which may exist or arise by reason of the following matters disclosed by survey,
 - Recording Date: December 30, 2008
 - Recording No.: 200812300003
9. Any rights, interests, or claims which may exist or arise by reason of the following matters disclosed by survey,
 - Recording Date: May 29, 2014
 - Recording No.: 201405290037

CHICAGO TITLE INSURANCE COMPANY

GUARANTEE/CERTIFICATE NO. 620026827

SCHEDULE B
(continued)

10. A deed of trust to secure an indebtedness in the amount shown below,

Amount: \$105,000.00
 Dated: December 21, 2015
 Trustor/Grantor: Mary Margaret Kiesel
 Trustee: Guardian Northwest Title and Escrow
 Beneficiary: Janet A. Weedman
 Recording Date: December 22, 2015
 Recording No.: 201512220107
 Affects: A portion of said premises.

11. A deed of trust to secure an indebtedness in the amount shown below,

Amount: \$187,000.00
 Dated: December 21, 2015
 Trustor/Grantor: Mary Margaret Kiesel
 Trustee: Guardian Northwest Title and Escrow
 Beneficiary: Janet A. Weedman
 Recording Date: December 22, 2015
 Recording No.: 201512220108
 Affects: A portion of said premises.

Said instrument contains the following verbiage:

This Deed of Trust is second and subordinate to that Deed of Trust recorded under Skagit County AFN 201512220107.

12. City, county or local improvement district assessments, if any.
13. Assessments, if any, levied by City of Mount Vernon.
14. In the event that the Land is occupied or intended to be occupied by the owner and a spouse or registered domestic partner as a homestead, the conveyance or encumbrance of the Land must be executed and acknowledged by both spouses or both registered domestic partners, pursuant to RCW 6.13 which now provides for an automatic homestead on such Land.
15. Your application for title insurance was placed by reference to only a street address or tax identification number. Based on our records, we believe that the legal description in this report covers the parcel(s) of Land that you requested. If the legal description is incorrect, the seller/borrower must notify the Company and/or the settlement company in order to prevent errors and to be certain that the correct parcel(s) of Land will appear on any documents to be recorded in connection with this transaction and on the policy of title insurance.

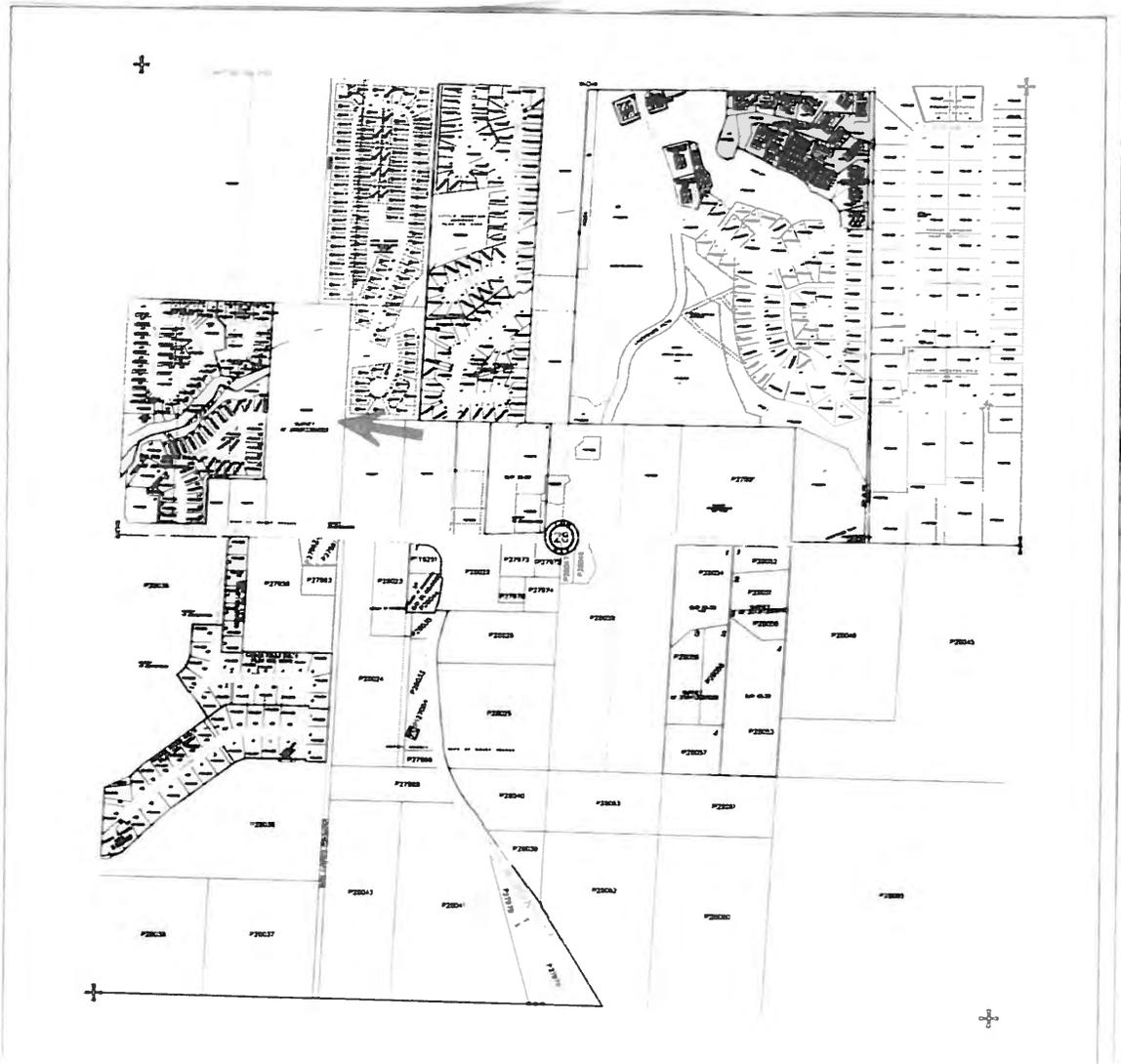
END OF SCHEDULE B

Legal Description: P28003**DESCRIPTION:**

That portion of the East ½ of the Southwest ¼ of the Northwest ¼ of Section 28, Township 34 North, Range 4 East, W.M., described as follows:

Beginning at the Southeast corner of said subdivision;
thence North 0°54'33" East along the East line of said subdivision, a distance of 30.02 feet to a point on the North line of Blackburn Road, and which point is the true point of beginning of this description;
thence continuing North 0°54'33" East along the East line of said subdivision, a distance of 1,284.15 feet to the Northeast corner of said subdivision;
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thence North 88°43'35" East, along the North line of Blackburn Road, parallel with, and 30.00 feet North of, when measured at right angles from the South line of said subdivision, a distance of 429.95 feet to the true point of beginning.

Situate in the County of Skagit, State of Washington.



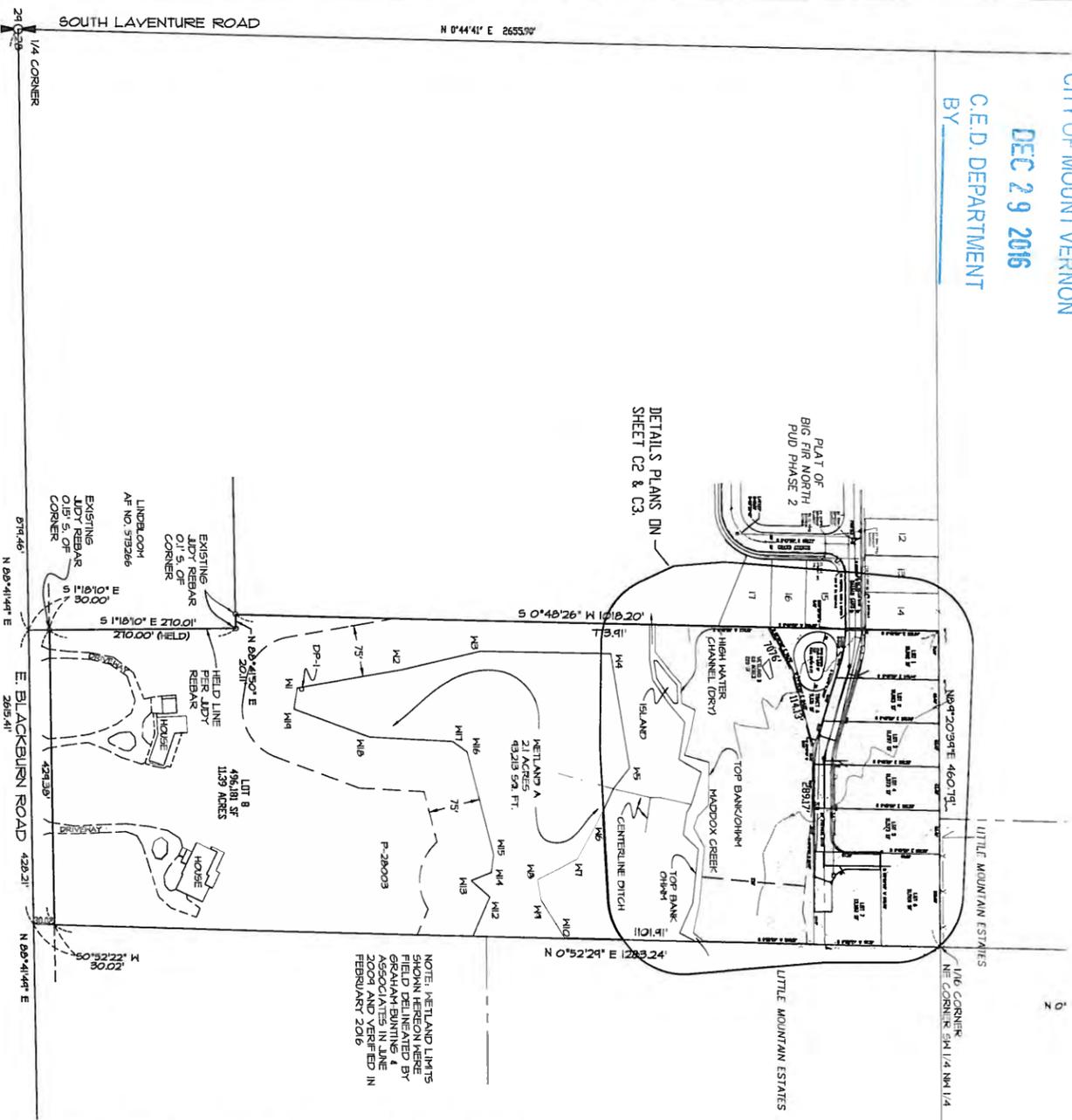
"This plat is for your aid in locating your land with reference to lots and other parcels. While this plat is believed to be correct, the Company assumes no liability for any loss or injury by reason of reliance thereon."

EAST VILLAGE 8-LOT SHORT PLAT

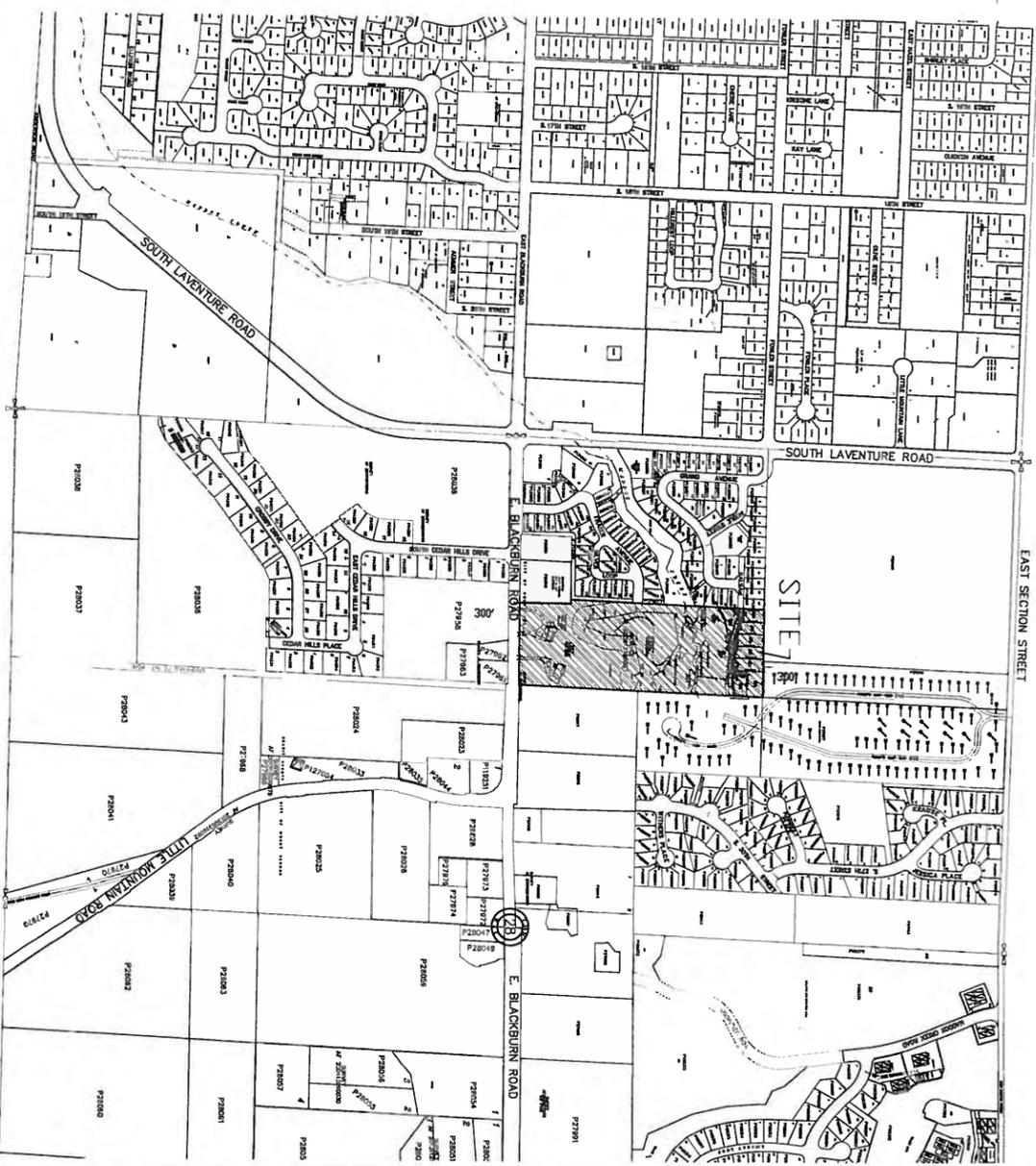
RECEIVED
CITY OF MOUNT VERNON

DEC 29 2016

C.E.D. DEPARTMENT
BY _____



OVERALL SITE PLAN



VICINITY PLAN



16-1574

Overall Site Plan
Vicinity Plan

East Village Short Plat
2437 E Blackburn Road
Owner: Samish Bay land Company
Burlington, WA 98233

HERRIGSTAD
ENGINEERING & SURVEYING
DALE K. HERRIGSTAD P.E., P.L.S.
4320 WHISTLE LAKE ROAD
ANACORTES, WA 98221 (360) 299-8804

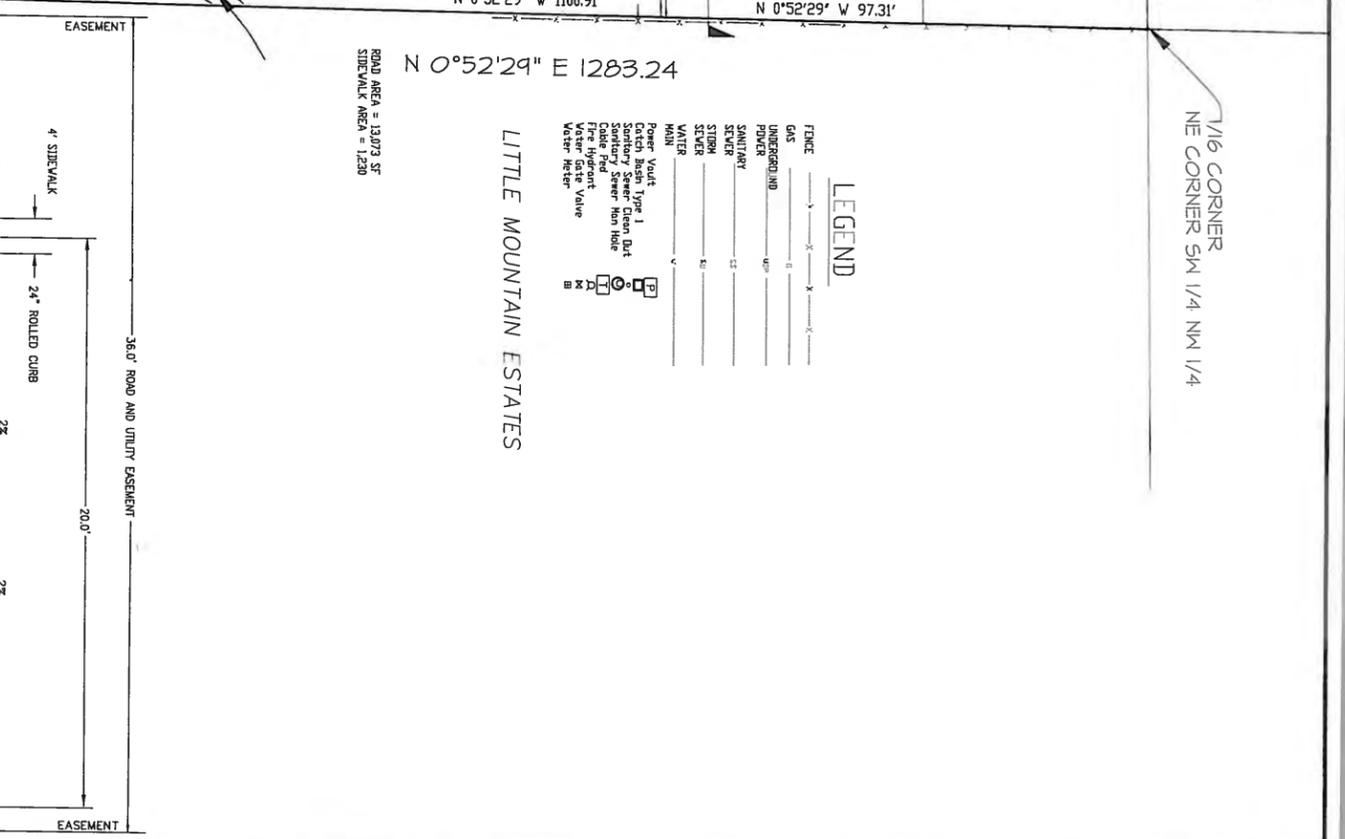
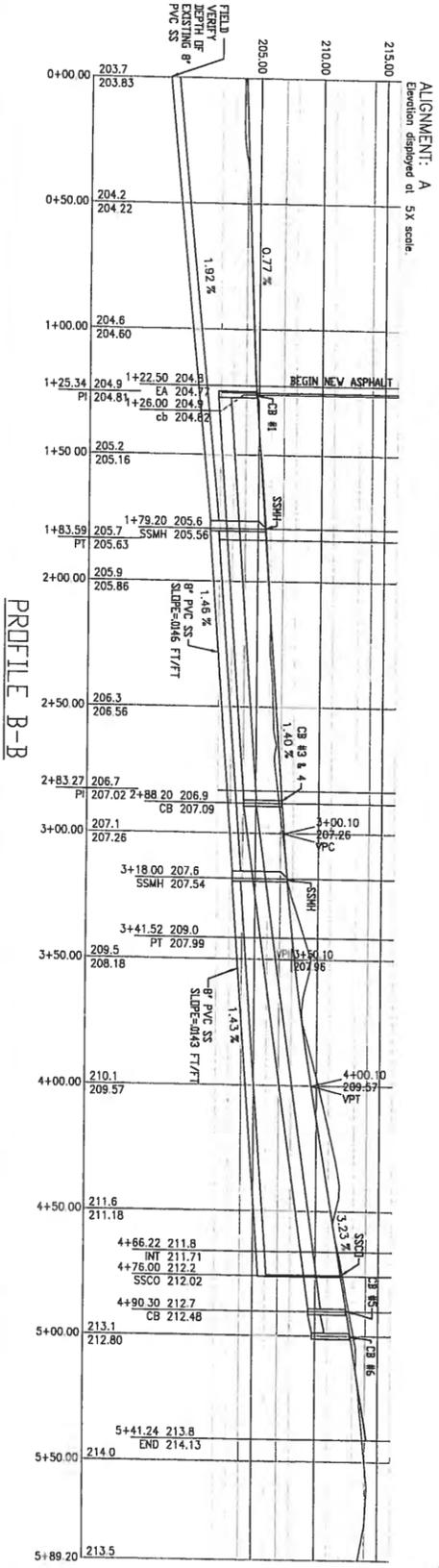
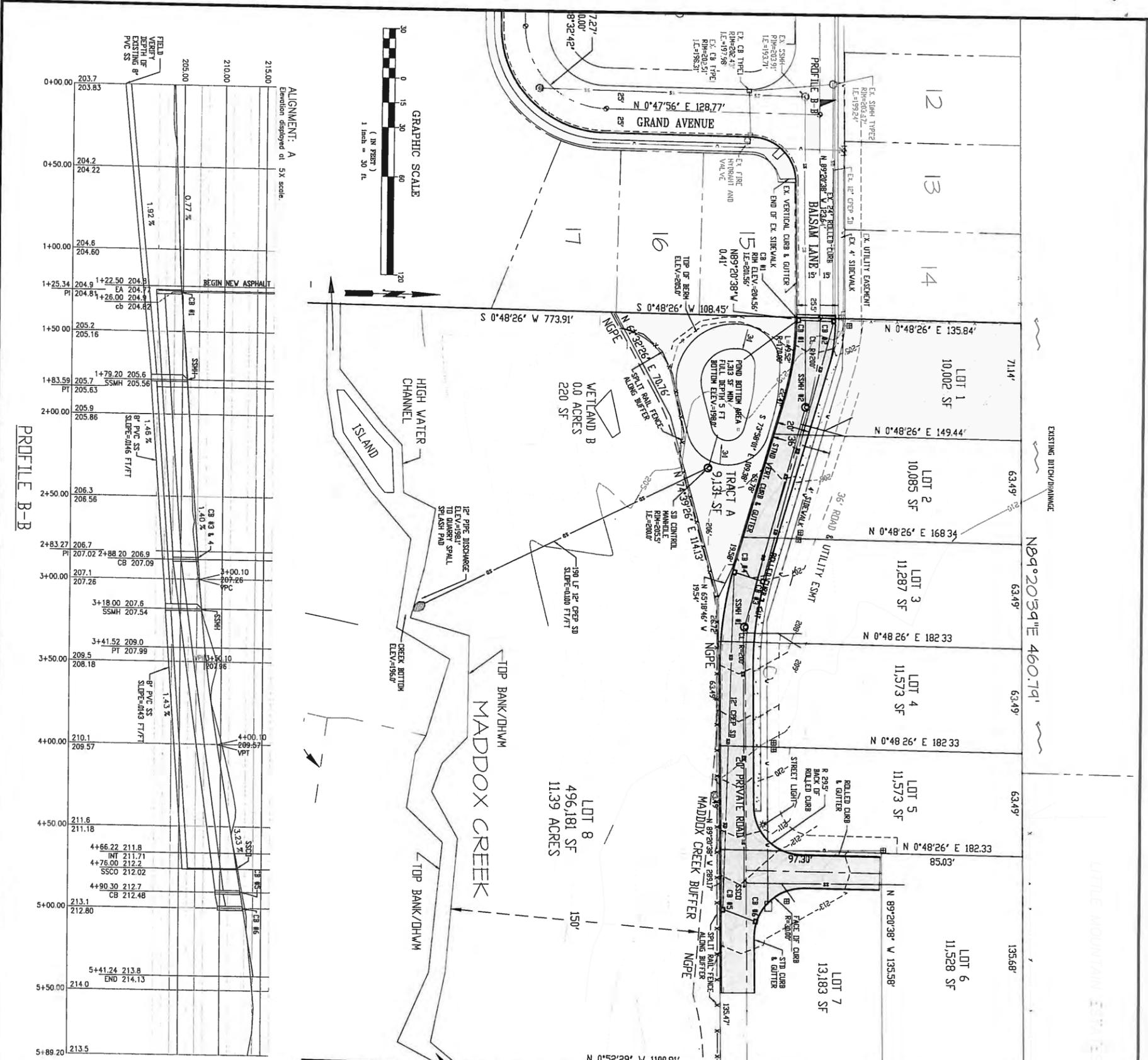
REVISIONS	BY	DATE

SHEET NO. C1

REV. -

REV. - December 21, 2016

SHEET 1 of 3



REV. - December 21, 2016



Proposed Site Plan
Road Profile and
Road Section

East Village Short Plat
2437 E Blackburn Road
Owner: Samish Bay land Company
Burlington, WA 98233

HERRIGSTAD
ENGINEERING & SURVEYING
DALE K. HERRIGSTAD P.E., P.L.S.
4320 WHISTLE LAKE ROAD
ANACORTES, WA 98221 (360) 299-8804

REVISIONS	BY	DATE

DATE: Dec 2016
SCALE: As Shown
DRAWN: D. HERRIGSTAD
CHECKED: D. HERRIGSTAD
SHEET 3 OF 3



Date: February 10, 2017

To: Rebecca Lowell, Senior Planner

From: Esco Bell, Public Works Director
 Ana Chesterfield, Development Services Engineering Manager *Ac*

Subject: PL16-150 Preliminary Short Plat – Request for deferral of required minimum improvements per MVMC 16.032.060

The purpose of this memo is to recommend a deferral of required minimum improvements associated with the short plat noted above.

City codes and requirements addressing the process for required minimum improvements for short plats are cited as follows:

In accordance with Title 16.032.060, the community and economic development department shall ascertain that the minimum required improvements have been installed along with all the items listed in MVMC Title 16.20 prior to granting final approval of any short subdivisions.

MVMC Title 14.14.110 states: "Short plats will be subject to the applicable subdivision codes. Currently they are required to construct street improvements unless the city engineer recommends and the city council approves a waiver or deferral of the requirement. Subsequent building permits and sequential building permit approvals within the short plat would be subject to concurrency requirements".

Requested deferral of required minimum improvements is described as follows:

The specific location where the deferral of the installation of the improvements is being requested is located along E Blackburn Road fronting lot 8 of the proposed short plat.

The deferred installation of street improvement includes: widening of street, installation of sidewalk curb and gutter, storm conveyance system, sanitary sewer extension, water system and other utilities.

Recommendation: The Public Works Director, acting through his authority as the city engineer, recommends approval of the requested deferral based on the following assessments:

1. The deferral does not detract from the intent and purpose of requirements for the proposed short plat to install public infrastructure needed to serve its development, because of the particular geography of the site.

2. No burdens for developing the public infrastructure are displaced to others or the public as a consequence of the deferral, and the deferral does not detract from the orderly development of public infrastructure.
3. The public retains all needed authority and control to assure that any future development of the site will cause public improvements affected by the recommended deferral to be built.