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11 June 2011

Mr. Eugen Klein, Owner
Mrs. Edith Klein, Owner
4070 Delbrook Ave.
North Vancouver, BC Canada

Reference: Blaine Property
Subject: Response to City of Blaine Letter Dated 13 April 2009 and to the Technical Review Committee

Dear Mr. Klein:

At your request, EnviroVector has prepared a response to the 13 April 2009 letter and 5 March 2009 & 8 December 2008 Technical Review Committee Minutes both from the City of Blaine regarding impacts to on-site critical areas. We will address only relevant portions of the County's comments associated with critical areas. The subject parcels (400106 530277 0000, 400106 487260 0000, 400106 508255 0000, 400106 430178 0000, 400106 465259 0000, 400106 419225 0000, 400106 511105 0000, 400106 530273 0000, 400106 531255 0000, and 400106 531245 0000) are located between Yew Avenue and Odell Street south of Pipeline Road within the City of Blaine, Washington, Section 06, Township 40N, Range 01E, Willamette Meridian (**Figure 1**).

The majority of the comments received from the City requested that the site plan be revised to reduce impacts to Wetland A and its buffer. The City's concerns in this regard are to Cain Creek and water quality issues. Cain Creek extends through Wetland A and eventually drains to sensitive marine waters. In addition, although Wetland A and Wetland B are both located on the subject property, the City believes that the two wetlands are contained within two separate

watersheds. Thereby, wetland impacts should be mitigated in the same watershed in compliance with City of Blaine code requirements.

The City suggested that the site plan be revised to reduce impacts to Wetland A. One suggestion from the City is to shift the large building southward away from the higher quality Wetland A and from Cain Creek. This would reduce impacts to Wetland A and its buffer and would satisfy the City's concerns for preserving the character and water quality of Cain Creek.

EnviroVector has worked closely with Freiheit & Ho Architects in revising the site plan to resolve the City's concerns regarding impacts to Wetland A and its buffer (see Blaine Industrial Park Wetland Report and Mitigation Plan Revised 11 June 2011). The site plan has been revised to reduce impacts to Wetland A and its buffer to the greatest extent practicable while preserving the desired land use objectives.

In this response letter, EnviroVector also addresses the City's specific comments regarding the wetland mitigation plan where the City has requested additional information for their clarification. These specific comments have been incorporated into the 11 June 2011 Blaine Industrial Park Wetland Report and Mitigation Plan.

EnviroVector addresses the City's general and specific comments in their 13 April 2009 letter item by line item below:

City of Blaine 13 April 2009 letter General Comment #1

1. The project site crosses a watershed divide. The report documents impact in the Cain Creek watershed, and the watershed to the south. However, the majority of the mitigation is proposed for the watershed to the south. Approximately 47,000 square feet of mitigation for impact in the Cain Creek watershed is proposed outside the watershed. This transfer should be avoided. Where mitigation is not possible in the watershed, the impact should be avoided or every effort should be made to reduce the impact so that transfer of mitigation out of the watershed is the absolute minimum necessary. Off-site mitigation in other areas along the creek should be pursued before mitigation outside the watershed.

Our suggestion is that the impact to the Wetland A be reduced by reducing the primary building pad size and/or shifting it to the south. This will both reduce the need for mitigation, and expand the area where mitigation can occur in the Cain Creek watershed.

EnviroVector has worked closely with Freiheit & Ho Architects to revise the site plan so that no transfer of mitigation would occur from the Wetland A/Cain Creek watershed to the Wetland B watershed (see Blaine Industrial Park Wetland Report and Mitigation Plan Revised 11 June 2011). We have complied with the City's suggestion to reduce the impact to Wetland A by shifting the primary building to the south. This has reduced the need for mitigation and has expanded the area where mitigation can occur in the Cain Creek watershed.



City of Blaine 13 April 2009 letter General Comment #2

2. Buffer reduction/averaging for the Category II (Wetland A) wetland should be minimized. If necessary, to maintain project viability, impact should be shifted south towards Wetland B. The report has not demonstrated why the areas that are receiving a greater buffer are more sensitive, nor has it demonstrated that the areas receiving the reduced buffer are less sensitive.

Buffer reduction and averaging for the Category II (Wetland A) wetland has been reduced significantly in compliance with the City's request through shifting the large building and associated access and parking southward away from Wetland A. The averaged buffer areas primarily consist of historic pastureland, which has very low habitat value. Preserved and replacement buffer will be enhanced through the mechanical removal of invasive weeds and extensive plantings of native vegetation. In essence, low quality wetland buffer will be replaced with wetland buffer of high quality habitat value.

City of Blaine 13 April 2009 letter General Comment #3

3. The report indicates that the alternatives explored had the same impacts and were the only practicable alternatives. These alternatives have virtually identical impacts, and we believe that alternatives that reduced impacts on Wetland A, or reduced wetland impacts overall, are possible and have not been adequately explored. A revised plan should more adequately explore alternatives that reduce impact.

EnviroVector has worked closely with Freiheit & Ho Architects to explore alternatives to the site design that would reduce wetland and buffer impacts to a greater extent than the previous plan. Significant progress has been made to reduce wetland and buffer impacts on Wetland A. The site plan has been revised to significantly reduce both wetland and buffer impacts to Wetland A. The revised site plan shifts the larger building (Building B1) to the south in such a way to significantly reduce impacts to Wetland A and its buffer as recommended by the City.

City of Blaine 13 April 2009 letter General Comment #4

4. The traffic mitigation for this project will require changes to the intersection of Yew Avenue and Pipeline Road. Pipeline Road will be reoriented toward the south, probably beginning just west of the creek crossing. This will impact wetlands and buffer area. It will also reduce the area available for buffer replacement, averaging, and enhancement. Any revised plan should reflect this.

The 11 June 2011 revised Wetland Report and Mitigation Plan addresses the most recent site plan changes, including changes to the access road. All potential wetland and buffer impacts have been identified and appropriate mitigation has been proposed to off-set impacts in compliance with City of Blaine Code.

City of Blaine 13 April 2009 letter Specific Comment #1

Specific Comments:

1. Revise the Executive Summary and Introduction sections of the report as is appropriate per the specific comments and changes recommended and required herein.

EnviroVector has incorporated the City's requested changes to the Executive Summary and Introduction sections of the Wetland Report & Mitigation Plan in the 11 June 2011 revised version.

City of Blaine 13 April 2009 letter Specific Comment #2

2. A requirement to install wetland signs at the perimeter of the site, and along trails at prominent locations should be added to the mitigation plan.

The requirement to install wetland signs at the perimeter of the site and at prominent locations has been added to the mitigation plan (See Section 8.0 in the 11 June 2011 Wetland Report & Mitigation Plan, Paragraph 5, under the heading "*Wetland Signs*").

City of Blaine 13 April 2009 letter Specific Comment #3

3. The inclusion of woody debris should be made more specific. Detail should be added that indicates how many woody debris features will be added, what is the minimum size, and where they will be located (approximately). If placement is to be determined in the field the report should indicate that, and note what factors will determine placement and who will make the decision.

A performance standard for the installation of large woody debris has been incorporated into the Wetland Report & Mitigation Plan in the 11 June 2011 revised version. **Figures 16-18** of the 11 June 2011 Wetland Report & Mitigation Plan provide a typical for the installation of habitat features proposed for wetland enhancement. However, the final placement of large woody debris will be field located by an EnviroVector biologist to maximize habitat enhancement. Habitat diversity would be improved through the installation of habitat features in the wetland and the buffer that include placing a select number of downed logs over 12-inches in diameter on the forest floor, and/or by moving additional wood and downed woody debris into the created wetland and wetland buffer to improve wildlife habitat functions.

The source of large woody debris (lwd) would come from the clearing of vegetation on the project site. Although trees will be preserved to the greatest extent practicable, some trees located in the wetland creation areas would require removal to reach final grade. Those trees would be placed in the mitigation area as large woody debris including snags, logs, and root wads. The installation of large woody debris would follow guidelines by WDFW and others (2002), and by Knutson and Virginia (1997) (See 11 June 2011 Wetland Report and Mitigation Plan for references).

City of Blaine 13 April 2009 letter Specific Comment #4

4. The information regarding nest boxes should be more specific. Detail should be added that indicates what nest boxes will be used, and where they will be located (approximately). If placement is to be determined in the field the report should indicate that, and note what factors will determine placement and who will make the decision.

The placement of nest boxes is illustrated in **Figures 16-18** of the 11 June 2011 Wetland Report and Mitigation Plan. Nest box standards have been included as **Appendix G** of the Wetland Report & Mitigation Plan in the 11 June 2011. This mitigation plan will provide a visual screen between the wetlands and proposed land use. Wetland functions are expected to improve with the installation of six (6) bird houses, and six (6) bat boxes, and three (3) wood duck boxes within the wetland and wetland buffer areas. Wood duck boxes would be placed in ponded areas within the wetland creation area contiguous with Wetland B.

City of Blaine 13 April 2009 letter Specific Comment #5

5. Weed removal is noted in the report, but no protocol is described for removal of the Reed canarygrass, Himalayan blackberry and Scotch Broom. Include a statement regarding the removal technique (i.e. cut and apply herbicide, excavate, pull plant and roots, etc.).

Specific weed control protocols for reed canarygrass, Himalayan blackberry, and Scotch broom have been incorporated into the Wetland Report & Mitigation Plan in the 11 June 2011 revised version (See Section 8.1---*Wetland Creation*, Page 13, under *Weed Control Performance Standards*). A summary of this section is provided below.

Weed Control Performance Standards

Remove/control weedy or exotic invasive plants (e.g., Scot's broom, reed canarygrass, Himalayan blackberry, purple loosestrife, etc.) by manual or chemical means approved by City of Blaine (if herbicides are used, they will be applied by a licensed applicator), if not meeting performance standard following each monitoring event. Use of herbicides or pesticides within the buffer enhancement area would only be implemented if other measures failed or were considered unlikely to be successful. Conifers will be planted to eventually shadeout invasive weeds and produce acidic soils conducive for native plant growth, while discouraging invasive non-native weeds.

Reed Canarygrass Standards. If reed canarygrass has been identified to exceed 20 percent areal cover in the wetland or buffer mitigation areas during a monitoring session, the reed canarygrass will be covered by heavy grade geofabric. The geofabric will be staked to the ground. Slits will be cut in the fabric allowing the installed plants to extend through. The geofabric will cover the reed canarygrass preventing growth and photosynthesis.

Scot's Broom Standards. If Scot's broom has been identified to exceed 20 percent areal cover in the wetland or buffer mitigation areas during a monitoring session, the Scot's broom will be mechanically or manually removed. For added measure City approved herbicide will be painted

onto the cut stalk (wicked) by a licensed applicator. Removal of plant material will not occur in late summer or autumn to avoid seed dispersal. All plant materials will be contained and disposed of offsite to be shredded and/or composed.

Purple Loosestrife. If purple loosestrife has been identified to exceed 20 percent areal cover in the wetland or buffer mitigation areas during a monitoring session, the purple loosestrife will be controlled through either mechanical or chemical means, if approved by the City. Small infestations will be controlled by removing all roots and underground stems. Because it is difficult to remove all of the roots in a single digging, the area will be monitored for several growing seasons to ensure that purple loosestrife does not regrow from roots or seed. This method is most useful on young infestations.

Plants and roots will be disposed of offsite. Maintenance crews will take care to prevent further seed spread from clothing or equipment during the removal process. Removal of all plant material is important. Small segments of purple loosestrife stems can become rooted and reestablish the infestation.

City approved herbicides may be used to control purple loosestrife in areas too large to be controlled by digging. Also, herbicides may be applied to individual plants selectively in landscape situations to prevent killing desirable plants. Infestations growing along streams or in marshy areas may require specialized equipment and application by trained professionals. All herbicides would be applied by a licensed applicator.

Glyphosate (Rodeo or Roundup) would be applied from July to early September. Many formulations of glyphosate are sold but only those labeled for aquatic use would be applied in or near water. For example, the Rodeo and Glypro formulations of glyphosate can be used in water. With the Rodeo or Glypro formulations, a nonionic surfactant approved for aquatic sites at 0.25% vol/vol must be added to the spray solution. Roundup and similar glyphosate formulations may be used to remove purple loosestrife from large plantings or infestations away from water. Best results have been obtained when glyphosate is applied as a 1 to 1.5% concentration (1 to 1.5 gallons glyphosate per 100 gallons of water) or (1.3 to 1.9 fl. oz./gallon of water) at bloom or shortly thereafter.

A variety of sprayers, including backpack sprayers and boat-mounted sprayers, may be used to control purple loosestrife in aquatic sites. Wick application is also effective but is labor intensive. Spray dye added to the tank may be useful to ensure uniform application to purple loosestrife with minimal herbicide applied to desirable plants.

Eliminating the entire vegetative cover will promote purple loosestrife seed germination, which can result in an increase in plant density rather than control. Since glyphosate does not provide residual control, treated areas will need to be monitored for regrowth from the roots or seedlings for several years. A 2,4-D formulation labeled for use near water applied as a 2% solution (2 gallons 2,4-D per 100 gallons of water) or (2.6 fl. oz./gallon of water) will prevent seedling establishment when applied in early fall or spring before the plants can establish perennial characteristics.

Garlon 3A (triclopyr) is a selective broadleaf herbicide that will not kill cattail or other desirable monocot species. Important: Only Garlon 3A formulation is labeled for use in wetland sites. Minimize overspray to open water. Garlon will provide good to excellent purple loosestrife control when applied in the pre to early flower or late flower growth stages. Garlon should be applied as a 1 to 2% solution (1 to 2 gallons Garlon per 100 gallons of water or 1.3 to 2.6 fl. oz./gallon of water) and will provide some residual seedling control. Garlon can be applied in dryland sites but should not be used in landscapes or flower beds because soil residual of the herbicide may prevent establishment of other horticultural plants.

Regardless of the herbicide applied, the infested areas would be monitored to ensure that purple loosestrife does not reinfest from root or seed.

Himalayan blackberry. If Himalayan blackberry has been identified to exceed 20 percent areal cover in the wetland or buffer mitigation areas during a monitoring session, the Himalayan blackberry will be mechanically or manually removed. For added measure City approved herbicide will be painted onto the cut stalk (wicked) by a State-licensed applicator. Removal of plant material will not occur in late summer or autumn to avoid seed dispersal. All plant materials will be contained and disposed of offsite to be shredded and/or composed.

6. The planting protocol should include the use of mulch rings, or where appropriate broadcast mulch. Non-fertile, woody mulch with a depth of 3-4 inches should be specified.

In compliance with the City's request, the use of mulch rings and broadcast mulch have been incorporated into the Wetland Report & Mitigation Plan in the 11 June 2011 revised version (See Section 8.3---Planting Plan, 4th paragraph, Page 17). Non-fertile, woody mulch will be installed to the depth of 3-4 inches in areas graded for mitigation. Mulch rings will be placed around installed plants at a radius of 6-12 inches.

7. There should be a performance standard for all three invasive species present on the site, Reed canarygrass, Himalayan blackberry, and Scotch broom. This should apply at each year of monitoring.

Specific weed control performance standards for reed canarygrass, Himalayan blackberry, and Scotch broom have been incorporated into the monitoring portion of the Wetland Report & Mitigation Plan in the 11 June 2011 revised version (See Section 9.2, Paragraph 4, Page 22, Section, 8.1---*Wetland Creation under Weed Control Performance Standards, and Section 9.6---Maintenance and Contingency.*

Invasive Weed Maintenance Schedule.

- At the time of construction completion.
 - If the areal cover of Scot's broom, reed canarygrass, and Himalayan blackberry, and purple loosestrife exceeds 20% of the wetland area, the invasive weed will be eliminated through procedures outlined in Section 8.1---*Wetland Creation under Weed Control Performance Standards* for Scot's broom, reed canarygrass, and Himalayan blackberry, and purple loosestrife. Also see Section 9.6---*Maintenance and Contingency*.
- Early in the growing season of the first year after construction.
 - If the areal cover of Scot's broom, reed canarygrass, and Himalayan blackberry, and purple loosestrife exceeds 20% of the wetland area, the invasive weed will be eliminated through procedures outlined in Section 8.1---*Wetland Creation under Weed Control Performance Standards* for Scot's broom, reed canarygrass, and Himalayan blackberry, and purple loosestrife. Also see Section 9.6---*Maintenance and Contingency*.
- Early in the growing season of the second year after construction.
 - If the areal cover of Scot's broom, reed canarygrass, and Himalayan blackberry, and purple loosestrife exceeds 20% of the wetland area, the invasive weed will be eliminated through procedures outlined in Section 8.1---*Wetland Creation under Weed Control Performance Standards* for Scot's broom, reed canarygrass, and Himalayan blackberry, and purple loosestrife. Also see Section 9.6---*Maintenance and Contingency*.
- Beginning and end of the third growing season.
 - If the areal cover of Scot's broom, reed canarygrass, and Himalayan blackberry, and purple loosestrife exceeds 20% of the wetland area, the invasive weed will be eliminated through procedures outlined in Section 8.1---*Wetland Creation under Weed Control Performance Standards* for Scot's broom, reed canarygrass, and Himalayan blackberry, and purple loosestrife. Also see Section 9.6---*Maintenance and Contingency*.

8. The statement on herbicide should require a state-licensed applicator.

If herbicides are necessary, the herbicide will be applied by a State-licensed applicator. This language has been incorporated into the Wetland Report & Mitigation Plan in the 11 June 2011 revised version (See Section 8.1---*Wetland Creation under Weed Control Performance Standards*, Page 13).

9. A requirement for weeding around new plantings is strongly encouraged and should be repeated in successive growing seasons. This should be part of the maintenance program.

The maintenance program includes weed control. Weeding around new plants during successive growing seasons has been incorporated into the Wetland Report & Mitigation Plan in the 11 June 2011 revised version (See Section 9.6---*Maintenance and Contingency*). The weed control program also includes:

- If the areal cover of reed canarygrass exceeds 20% of the wetland area during a monitoring event, measures will be taken to reduce areal cover below 20% through: 1) cover reed canarygrass with heavy grade geofabric, 2) use City of Blaine approved herbicides, or 3) mechanical means to physically remove the reed-canarygrass from the wetland and re-plant the area with native plant species. See Section 8.3 for more details. (M & C)
- If the areal cover of Scot's broom exceeds 20% of the wetland area during a monitoring event, measures will be taken to reduce areal cover below 20% through: 1) mechanical or manual removal, 2) use City of Blaine approved herbicides and re-plant the area with native plant species. See Section 8.3 for more details. (M & C)
- If the areal cover of purple loosestrife exceeds 20% of the wetland area during a monitoring event, measures will be taken to reduce areal cover below 20% through: 1) mechanical or manual removal, 2) use City of Blaine approved herbicides and re-plant the area with native plant species. See Section 8.3 for more details. (M & C)
- If the areal cover of Himalayan blackberry exceeds 20% of the wetland area during a monitoring event, measures will be taken to reduce areal cover below 20% through: 1) mechanical or manual removal, 2) use City of Blaine approved herbicides and re-plant the area with native plant species. See Section 8.3 for more details. (M & C)

10. Consider broadcast mulch and irrigation as contingency options.

In compliance with the City's request, the use of mulch rings and broadcast mulch have been incorporated into the contingency options of the Wetland Report & Mitigation Plan in the 11 June 2011 revised version. The contingency for irrigation also has been incorporated into the Mitigation Plan. (See Section 9.6---*Maintenance and Contingency* under *Planting Plan* & Section 8.3---*Planting Plan*, 4th paragraph, Page 17).

11. There are numerous trails proposed in the wetland buffers. Although we are generally supportive of trails, many of these trails could be removed to avoid unnecessary impacts on the wetlands. However, please be advised there are specific trail requirements related to the trail locations and design shown in the City's Non-Motorized Transportation Plan, which have been provided through the TRC meetings.

Trails through the buffer areas have been removed to comply with the City's request.

12. The small east-west oriented drainage is named Cain Creek and flows to Semiahmoo Bay not Drayton Harbor as indicated. Please adjust the report. **Note:** Prior to Blaine Harbor Marina construction/expansion the creek drained to Drayton Harbor. It now drains to Semiahmoo Bay just north of Marine Drive
References occur on Page 2, 5th para.; 6th para.; Page 3, 1st para.; Page 3, 2nd para.; Page 7 5th para.

The reference drainage has been labeled Cain Creek in the 11 June 2011 Wetland Report & Mitigation Plan figures. References to Cain Creek in the 11 June 2011 Wetland Report & Mitigation Plan have been revised in the sections referenced above in Specific Comment #12. This correction has been carried through the report in compliance with the City's correction.

13. The second basin discussed in the report, containing Wetland B, is not an enclosed basin. It drains through a culvert under Yew Avenue, daylights between I-5 and Yew Avenue and continues west under I-5 via a second culvert. This drainage enters Drayton Harbor after passing through properties to the west of the subject property. An image is attached that illustrates this drainage connection to the west.

The discussion on Wetland B has been revised to consider that the basin is not enclosed.

14. Summary and Conclusion on Page 29 refers to "County" zoning regulations. This should reference "City of Blaine."

The summary and Conclusion on Page 29 no longer refers to "County" zoning regulations. It now references "City" rather than "County".

Technical Review Committee (TRC) Minutes

Critical Areas Issues in 5 March 2009 TRC Minutes. Critical Areas comments revolve around impacts to Wetland A and those impacts encroaching too closely to Cain Creek. However, the large building has been shifted to the south substantially reducing impacts to Wetland A and avoiding encroachment of impacts too closely to Cain Creek. There was some discussion of which water body Cain Creek drains. The databases show Cain Creek draining to Drayton Harbor. However, after the Drayton Harbor marina construction, the Creek was diverted to Semiahmoo Bay. There also was some discussion on the watershed divide between Wetland A and Wetland B. The 11 June 2011 Revised Wetland Report addresses these wetlands within separate watersheds in compliance with the City's request. No mitigation is transferred between watersheds in compliance with City of Blaine Code. The Bald Eagle plan addresses construction windows, possible impacts, conservation measures, and a vegetation plan. No eagle habitat trees are proposed for removal. The Bald Eagle Plan proposes the planting of additional trees, as well as other measures to off-set possible impacts.

Critical Areas Issues in 5 March 2009 TRC Minutes.

The City had some concerns that a 2:1 mitigation ratio would be required by the State Department of Ecology. The 11 June 2011 Wetland Report & Mitigation Plan has been revised to provide a 2:1 wetland mitigation ratio as requested by the City. The City also had some concerns that the proposed land use would encroach too closely to Cain Creek. However, the large building has been shifted to the south substantially reducing impacts to Wetland A and avoiding encroachment of impacts too closely to Cain Creek. The City had some comments regarding the Bald Eagle. However, Mr. Klein distributed a copy of the PE Consultants LLC Bald Eagle Management Plan at the meeting. The Management Plan is being reviewed by the City. PE Consultants LLC met with the Washington Department of Fish and Wildlife (WDFW) at the site and has consulting with the WDFW in preparation of the Bald Eagle Management Plan.

Sincerely,



Curtis Wambach
Senior Biologist & Principal

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