

28d.

Response to Perteet's Wetland Review

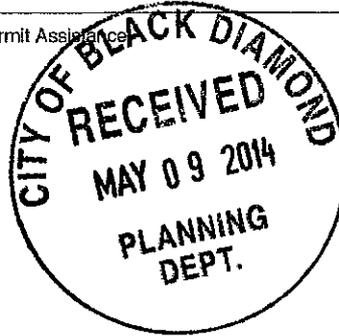
Wetland Resources, Inc.

April 28, 2014



Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance

9505 19th Avenue S.E.  
Suite 106  
Everett, Washington 98208  
(425) 337-3174  
Fax (425) 337-3045



April 28, 2014

City of Black Diamond  
Attn: Stacey Welsh, Community Development Director  
PO Box 599  
Black Diamond, WA 98010

Re: Response to Perteet's Wetland Review Memorandum dated March 31, 2014

Dear Ms. Welsh,

Please find below, quoted comments in bold from the Perteet memorandum - *The Villages MPD Phase 2 Place C – Wetland Review* - followed by the *Wetland Resources, Inc.* (WRI) response. In general, WRI's responses following each of Perteet's comments are either a concurrence with Perteet's conclusions or a clarification of the submitted materials.

1. **Wetland determination data forms from the original delineation in 2008 were resubmitted by Wetland Resources, Inc. Using the current Corps of Engineers wetland delineation data forms (U.S. Army Corps of Engineers 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region). The location of most of these soil pits was shown on the Sensitive Area Study and Wildlife Analysis Map for Villages Phase 2 Plat C. This indicates paired wetland/upland plots were provided for Wetland E1 (Plots E1, E2, and E6) and Wetland TOS (Plots E3, E4, and E7). However, the following are missing or incomplete:**
  - a. **Data forms of paired wetland/upland plots for Wetlands E7, E8, E10, and 213 were not provided.**

The data provided as part of Phase 2 Plat C's Wetland Review was for reference purposes only and represents what was originally submitted and approved for this portion of The Villages MPD. The wetland delineations as outlined in the Constraints Map (Exhibit G to The Villages MPD Development Agreement) are deemed final and complete through the term of the DA, pursuant to Section 8.2.1, and therefore additional paired data sites were not provided.

- b. The data form for Plot E5 was provided, but its location was not indicated on the map.**

Noted. The Location of Data Site E5 has been added to the Sensitive Area Study and Wildlife Analysis Map. See attached.

- c. Information is missing from the *Summary of Findings* on data forms for Plots E4 and E6 that needs to be corrected.**

Noted. The *Summary of Findings* for Data Sites E4 and E6 has been updated. See attached.

- 2. The wetland rating form for Wetland E1 was revised by Wetland Resources, Inc. based on previous comments by Perteet for the Phase 1A Preliminary Plat. Based on detailed topographic information, a drainage divide in the wetland unit has been documented within the southern area of Wetland E1. The rating was revised to evaluate the northwestern area of Wetland E1 as a separate wetland unit pursuant to Ecology Wetland Rating System for Western Washington and companion guidance materials published by the Washington State Department of Ecology. The revised wetland rating for Wetland E1 is consistent with BDMC 19.10.210 and we concur with the revised buffer width of 110 feet for the northwestern unit of Wetland E1 according to BDMC 19.10.230.**

Noted.

- 3. The wetland rating forms for Wetlands E7, E8, E10, TOS and 213 were reviewed to verify the classifications according to BDMC 19.10.210. Although we had slightly different rating scores for the three Category III depressional wetlands, (Wetlands E7, E8, and E10) and one Category IV depressional Wetland (Wetland 213). It did not change their rating or buffers. We also concur with the Category I rating for Wetland TOS.**

Noted.

- 4. The following items pertain to wetland buffers:**
  - a. It was agreed in our July 25, 2012 memo for the Villages Phase 1A that the buffer for Wetland E1 may stop at the logging road pursuant to BDMC 19.10.230 from the information provided by the applicant and due to the disturbance frequency of the road that was verified by City staff. For Wetlands E7, E8, and E10, the logging road is not distinct in the field, does not appear to have the same disturbance frequency, and would not serve as an ecological break: therefore, this code provision**

**would not apply. Revise the Phase 2 Plat C drawing sheets to indicate the full standard buffer widths for Wetlands E7, E8, and E10.**

Applicant has revised the Phase 2 Plat C drawings to include full standard buffer widths for Wetlands E7, E8, and E10. See revised sheets PP3, PP5, RS3, and SSWA3.

- b. Similarly, the Phase 2 Plat C drawings do not indicate what development actions are proposed in tracts that occur in proximity of Wetlands E7, E8, and E10. Information regarding the proposed development actions is needed in proximity of Wetlands E7, E8, and E10 or we request that a condition of plat approval be created by the City to require subsequent review of development activities in this area for direct or indirect wetland and/or buffer impacts.**

Applicant intends to develop the areas in proximity to Wetlands E7, E8, and E10 in much the same manner as has been proposed in Phase 2 Plat C, i.e., with single family residential units. The Applicant would be amenable to creating a condition that requires subsequent review of development activities in this area for their direct or indirect wetland and/or buffer impacts.

- c. Revise the drawings to label each buffer addition and buffer reduction area. Create a table itemizing the square foot area of location in order to document how and where equal or greater area is provided.**

Applicant has revised the Phase 2 Plat C drawings to label each area of buffer addition and buffer reduction. See revised sheets PP1-PP5, identifying 12 areas of buffer addition or reduction and a net buffer gain of 24,105 square feet.

- d. Please provide an explanation for how equivalent functions will be provided through buffer averaging that meets BDMC 19.10.230(H)(2d) the City of Black Diamond Sensitive Areas Ordinance, Best Available Science Review and Recommendations for Code Update, and Ecology guidance in Wetlands In Washington State, Volume 2, Guidance for Protecting and Managing Wetlands.**

BDMC 19.10.230(H)(2)(d) states "The buffer at it's narrowest point is never less than one-half of the required width except where the mayor or his/her designee finds that there is an existing feature such as a roadway that limits buffer dimension, or an essential element of a proposed development such as access that must be accommodated for reasonable use and requires a buffer".

As stated in the Sensitive Area Study, Buffer Averaging Plan and Wildlife Analysis, dated December 24, 2013, the buffer will be reduced to a minimum of 102 feet, which equates to a total of 8 feet or a seven (7) percent reduction. This

is significantly less than the fifty (50) percent reduction allowed per BDMC 19.10.230(H)(2)(d).

Equivalent functions will be provided through buffer averaging by meeting or exceeding the guidelines established in BDMC 19.10.230(H) and the Ecology guidance in Wetlands in Washington State, Volume 2, Guidance for Protecting and Managing Wetlands. The City of Black Diamond Best Available Science Review and Recommendations for Code update is silent on buffer averaging with the exception of referencing the aforementioned DOE document.

Equivalent functions and values are provided as follows:

- The buffer reduction areas are a maximum of 8 feet in width in an area that is densely vegetated. Densely vegetated buffers are known to provide the maximum protection to their critical areas, specifically water quality, hydrologic functions and wildlife habitat. Impacts to these functions will be de minimis from the small, proposed intrusion.
- Portions of the additional buffer area are located adjacent to the existing, frequently used gravel roads which significantly reduced the standard buffer width. These portions of the road will be decommissioned, allowing the buffer to function naturally.
- The Applicant is proposing a greater than 12:1 ratio for buffer averaging rather than the 1:1 required per BDMC 19.10.220(H). This provides an increase in permanently protected buffer area of 24,105 square feet.

The buffer averaging proposed provides greater protection to the functions and values of the wetland by: (i) limiting the width of the reduction areas; (ii) only proposing buffer averaging in areas where wetland protection will not be impaired, where existing gravel roads will be decommissioned, and where additional protection measures will be implemented; and (iii) and by providing a greater than 12:1 additional buffer to the reduced buffer ratio.

**5. The soft surface trail alignment within wetland buffers shown on the project drawings prepared by Triad Associates (sheets PP1 through PP5) is generally consistent with BDMC 19.10.220(B). These trails are mainly located within the outer 50% of the buffer for Category II, III, and IV wetlands, and the outer 25% of Category I wetland buffers. Where possible, these trails utilize existing logging roads in order to minimize buffer disturbances, however the following items are of concern:**

- a. **We recommend that the City require trail alignments to be field located to avoid clearing of trees. Downed woody debris that is removed for the trail should be placed in naturalistic locations similar to what exists on the site for ground contact, instead of making slash piles, and culverts should be provided when the trail bisects surface or groundwater drainages.**

Where feasible, Applicant will field locate trail alignments to avoid clearing trees, place downed woody debris in naturalistic locations, and use culverts when the trail bisects surface or groundwater drainages.

- b. We recommend combining the location of the trail with the infiltration trenches to minimize buffer disturbances.**

Applicant will combine the location of trails with infiltration trenches wherever feasible, subject to final design work with the City.

- c. We recommend eliminating the soft surface trail that bisects Wetland E1 using an abandoned logging road because this road has become naturalized and would cause disturbance to hydrology and vegetation and would be considered a wetland impact.**

Applicant proposes a condition that such trail will either be eliminated during final engineering design or designed and constructed in such a way as to avoid wetland impacts.

- d. Evaluate the trail location near Wetland E7 to occur in the outer 50% of the buffer.**

As suggested, the trail location has been revised to occur in the outer 50% of the buffer. See revised sheets PP3 and RS3.

- 6. Hydrology regimes play a major role in the biotic composition, structure and function of wetland ecosystems. Pursuant to Section 7.4.3(B) and (G) of the Villages MPS Development Agreement (DA), post-construction hydrologic support of wetlands is required because wetlands could be adversely affected by hydrologic alteration caused by development. The preliminary drainage analysis prepared by Triad Associates has modeled the water budget in each subbasin in order to design roof drain infiltration trenches, which will contribute water to wetland areas post-construction. We recommend that this approach be reviewed by the MDRT hydrogeologist to verify that no impact to wetland hydrology has been demonstrated and is consistent with wetland protection provisions relating to wetland hydroperiods described in the 2005 Ecology Stormwater Manual for Western Washington.**

See the attached memo from Golder Associates, dated May 8, 2014.

- 7. The Wetland Buffer Vegetation Management Plan of the Villages MPD Phase 2 Plat C prepared by Wetland Resources, Inc. used a significant tree inventory of the developed area that will be cleared. It is assumed from our field observations that the wetland buffers that remain after clearing will**

**have substantially similar species composition and spacing as the sampled area. However, post-clearing monitoring of the buffer areas is required verify [sic] that the tree density remains comparable to this tree inventory.**

The Wetland Buffer Vegetation Management Plan (WBVMP), dated December 19, 2013 identified specific provisions for monitoring tree density and invasive species cover. Modifications have been made to the monitoring program within the WBVMP to help clarify the protocol. Please see attached. It now reads as follows:

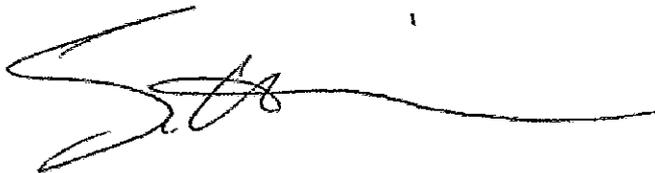
Requirements for monitoring on a wetland by wetland basis, when clearing is adjacent to a wetland buffer:

1. Initial compliance/as-built report of post development tree density in the wetland and adjacent buffer.
2. Annual site inspections (once per year in the fall) to document that the minimum tree density and weedy/invasive coverages are maintained in the wetland and adjacent buffer for five years from the date of initial clearing activity adjacent to the buffer.
3. Annual monitoring reports in the fall of each monitored year documenting the tree density, invasive species density and general conditions of the wetland and buffer observed during the annual site visits.

Thank you for your time and careful review of this project. If you have any questions or need further information regarding this project, please feel free to contact me at 425.337.3174.

Sincerely

*Wetland Resources, Inc.*

A handwritten signature in black ink, appearing to read 'S. Brainard', with a long horizontal flourish extending to the right.

Scott Brainard, PWS  
Principal Wetland Ecologist

