

36.

Wildlife Corridor Connections Analysis for  
Wetlands S, T, D4 and E1, Wetland Resources Inc.,  
August 12, 2013



Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance

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

August 12, 2013

BD Village Partners, LP  
Attn: Colin Lund  
10220 NE Points Dr., Suite 310  
Kirkland, WA 98033

**Re: Wildlife Corridor Connections Analysis for Wetlands S, T, D4, and E1**

Dear Mr. Lund,

As required by Condition of Approval # 89 of the City of Black Diamond Hearing Examiner's decision on The Villages MPD Preliminary Plat 1A, Wetland Resources, Inc. (WRI) has conducted the following analysis to determine: (1) whether any wildlife corridor connections between Wetlands S, T, D4 and E1 have the potential for a significant environmental benefit and (2) whether there are any measures to connect those wetlands that are reasonably feasible.

The City of Black Diamond Sensitive Areas Ordinance, Best Available Science Review, Parametrix 2008 (referred to herein as the "BAS document") defines habitat corridors on page 46 (attached hereto) as "contiguous, vegetated, dispersal conduits of variable length and width that connect isolated habitat patches to other patches or larger landscape habitat components and prevent isolation of habitat". The BAS document further explains on page 46 that these corridors are specifically designed and located "to provide for wildlife movement and alleviate the effects of habitat fragmentation." As discussed on pages 57 and 58 of the BAS document (attached hereto), and as depicted on the King County Wildlife Habitat Network Map (attached hereto), the City's Critical Areas Ordinance and The Villages MPD established wildlife corridors to provide connectivity between key environment features such as the Core Wetland Complex, priority habitats, and other critical areas within the City. For example, a 300-foot-wide wildlife corridor from the western edge of the Core Wetland Complex to the City's western boundary was established by The Villages MPD Condition of Approval No. 125. This 300-foot-wide wildlife corridor is depicted on the Constraints Map, which is set forth as Exhibit G to The Villages MPD Development Agreement. Within the boundary of The Villages MPD Phase 1A, wildlife corridors identified by King County Wildlife Networks are protected as Sensitive Area Tracts (953, 985, and 997), so they will be permanently protected to allow for the ongoing use by wildlife. See the Open Space/Sensitive Areas Exhibit for The Villages MPD Phase 1A attached hereto.

In analyzing the potential environmental benefit of providing wildlife corridors between Wetlands S, T, D4 and E1, we evaluated the BAS document, the King County Wildlife Habitat Network Map, the on-line Priority Habitat and Species Map (PHS on the Web) (attached hereto) and the existing conditions of the site, which have been noted throughout the review and approval process for The Villages MPD Phase 1A. Specifically, The Villages MPD Phase 1A project site has a history of disturbance including resource extraction such as: forest practices and gravel mining along with ongoing ORV use, hunting and recreation shooting, and pet and pedestrian use. *See* the email from Steve Pilcher to Colin Lund dated July 12, 2012 (attached hereto). These uses are all considered to create a disruption to wildlife habitat, use and movement.

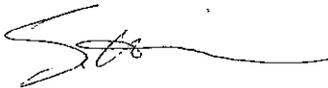
Currently, Wetlands T and D4 are directly connected via contiguous vegetation that allows for wildlife to move freely between these wetland areas. Wetland S is isolated from the other wetland areas by encircling gravel roads that are actively used as described above. Wetland E1 is isolated from Wetlands D4, S, and T by active gravel roads and an abandoned unvegetated gravel pit. Wetland E1 is contiguous to other sensitive area habitats and corridors to the east however, as well as the King County Wildlife Habitat Network. In their existing condition, only Wetlands D4, T and E1 meet the definition of Wildlife Corridor. Specifically, Wetlands D4 and T are Wildlife Corridors due to their proximity to each other, and Wetland E1 is a Wildlife Corridor due to its connectivity to other off-site systems. These existing corridors and connections will be protected by the provisions of the City of Black Diamond Sensitive Areas Ordinance and will not be disrupted by the proposed development activity.

Establishing wildlife corridor connections between Wetlands S, T, D4 and E1 could provide some minor long-term benefit. This benefit is limited primarily due to the existing condition of the site and that wildlife species are currently avoiding some of the more heavily travelled gravel roads that fragment habitat. Wildlife species, including elk have likely adapted to the fragmented habitat condition and are traveling through the existing connections such as between Wetlands D4 and T and Wetland E1 and off-site sensitive areas. While some benefit could be obtained, it is unlikely that greater than moderate benefit or a significant environmental benefit would occur by creating corridor links between wetland areas where they do not currently exist.

In addition, it would be impractical to connect these four wetland systems to each other with a habitat corridor without significantly altering The Villages MPD Site Plan as set forth in Exhibit U to The Villages MPD Development Agreement (attached hereto). As shown on The Villages MPD Site Plan, there are access roads that are planned to be installed between Wetlands D4 and S as well as between Wetlands E1 and S so that Phase 1A can be connected to Phase 2 of The Villages MPD. Given these site plan constraints, there are no reasonably feasible measures to connect Wetlands S, T, D4 and E1 with a habitat corridor.

If you have any questions or need further information regarding this project, please feel free to contact me at 425.337.3174.

Sincerely,

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

*Wetland Resources, Inc.*  
Scott Brainard, PWS  
Principal Wetland Ecologist

*nebulosus*), smallmouth bass (*Micropterus dolomieu*), and largemouth bass (*Micropterus salmoides*).

As stated previously, most streams within the Black Diamond UGA drain to either the Lake Sawyer subwatershed or Middle Green River subwatershed. However, only a small portion of Covington Creek (the outlet for Lake Sawyer) is located within the City and UGA limits, i.e., the vast majority of this creek falls outside of the study area. Additionally, a portion of the UGA provides infiltration and groundwater recharge to the Middle Green River and Crisp Creek.

For these reasons, general descriptions of the character of Covington Creek and the Green River are presented in this landscape-scale analysis section. Detailed descriptions of aquatic resources located within the City and/or UGA are presented in Technical Appendix A of this report.

### 5.3 TERRESTRIAL HABITAT

The undeveloped areas within the Black Diamond UGA provide a variety of habitat types for the full range of species that inhabit the Puget Sound Lowland. Urbanization will convert much of this area for human activities. These areas will generally be lost as productive habitat for most species.

Habitat corridors are an approach that land managers and regulatory agencies have implemented to address impacts on wildlife habitats and species within human-influenced environments. Habitat corridors are contiguous, vegetated, conduits that connect habitat patches to other patches or larger landscape habitat components and prevent isolation of habitat. Corridor establishment attempts to mimic in a managed landscape some of the biologic processes that occur in animal movement in natural landscapes.

The functions of corridors may be as conduits to provide movement or may provide habitat functions, if wide enough and vegetated (Rosenberg et. al. 1997). The functions generally provided by corridors include:

- Providing a conduit for animals to move between one habitat patch and another on a daily or seasonal basis, without providing substantial habitat functions. Such habitats may be relatively narrower than habitat patches;
- Reducing species extinction rates by ensuring that populations or individuals are not isolated from others in the landscape as well as redoing detrimental genetic effects of isolated populations such as inbreeding and random genetic drift;
- Providing increased foraging habitat for a variety of species, if large enough;
- Providing an avenue for vegetative communities to maintain reproduction viability and colonize new areas particularly species carried in animal feces;

King County has designated Wildlife Habitat Networks that are designed to link wildlife habitat found within sensitive areas, their buffers, priority habitats, trails, parks or open space. The network is designed to provide for wildlife movement and alleviate the effects of habitat fragmentation. The county specifies that the corridor should be 300 feet wide, although it may be reduced to 150 feet where necessary. The city has designated the King County Habitat Network as well as a "Study Area for Potential Fish and Wildlife Habitat Conservation Area" in its Comprehensive Plan, as shown in Figure 3-5.

Combining habitat corridors with the core area for water and wetland functions including the entire Lake Sawyer/Rock Creeks /Jones Lake and Jones Lake Creek corridor as well as the

beneficial effects on Lake Sawyer water quality, in addition to control of nutrients at the source.

7. Black Diamond Lake and the associated stream has a large and important concentration of similar features, including a large wetland complex, but is currently somewhat less important currently due to the smaller tributary watershed. As the area urbanizes, it will be increasingly important in providing water storage, and a variety of nutrient control functions essential to the health of the Lake Sawyer watershed.
8. Large wetland complexes that provide the headwaters of many streams are important in water storage and maintaining year round stream flows and temperature moderation. Such wetland complexes are present in the headwaters of Ginder Creek, Lawson Creek, Jones Creek, and Mud Creek as well as the Rock Creek tributary to the Cedar River.
9. Tributary streams in the area have a variety of gradients and flow conditions as well as varying degrees of human alteration. Generally they are less important in providing aquatic and wildlife habitat, but they are important in providing inputs of high quality low temperature water to the systems with the greater concentrations of landscape functions.
10. Terrestrial habitat in the Black Diamond UGA is extensive due to the largely undeveloped character of the area. Preservation of wildlife habitat and corridors can be accomplished in concert with preservation of the Rock Creek/Jones Lake/Jones Creek and Black Diamond Lake/Stream areas with extension of the corridors to the north to Ravensdale Creek and to the east and west UGA boundaries. Wildlife corridors will be enhanced by providing passage under major roads by enhancing crossings of water bodies to provide bridges with additional height and width for animal movement.
11. Frequently flooded areas in the Black Diamond UGA are contained within the recommended stream and wetland buffer areas of the core Rock Creek/Jones Lake/Jones Creek corridor and do not warrant separate regulation.
12. Geologic hazards of landslides, erosion hazards and seismic hazards are relatively limited in scope and can be addressed on a case-by-case basis.
13. Geologic hazards related to abandoned coal mines are of concern in Black Diamond due to its history of coal mining. Coal mine hazards relate primarily to depth of workings and the presence of openings. Generally deeper workings have the least hazard with shallow workings posing the greatest risk. Coal mine hazards can generally be addressed by site specific studies and mitigating measures.
14. Critical aquifer recharge areas are generally in the moderate risk range based on analysis of soil and geologic conditions and can be addressed by regulation of activities most likely to discharge hazardous materials and through protection of wellhead areas.

## 7.2 RECOMMENDATIONS

Regulatory implications of these findings leads to a recommendation that the City of Black Diamond take an approach that provides the highest level of protection for the most important areas of the city that contribute the most to current ecological functions. This would be accompanied by a lower level of protection for those specific sensitive area resources in specific contexts where they contribute less to key functions. By this focused approach, the city is likely to be successful in preserving key ecological functions while accommodating growth goals.

Key elements of this approach include:

1. The Rock Creek/Jones Lake/Jones Creek corridor and the Black Diamond Lake/Stream corridors and the associated wetland complexes should be recognized as a core area that provides a variety of water supply, water quality, and habitat functions. These functions are essential to the preservation of water quality in Lake Sawyer, and to continue to provide the rich ecological functions of these systems. To function as wildlife corridors, they should extend to Ravensdale Creek to the north and the UGA boundaries to the east and west. They should be preserved with a minimum buffer width of 225 feet and requirements for adjacent uses to incorporate measures to reduce proximity impacts from noise, light and glare, stormwater and predation from pets. These corridors also should extend to the boundaries of adjacent steep slopes and may be widened where possible through a transfer of a portion of the buffer area from lower priority stream complexes.
2. Large wetland complexes at the headwaters of Ginder Creek Lawson Creek, Mud Creek and the Rock Creek tributary to the Cedar River that provide important inputs of water to the core through surface and groundwater should be preserved with buffers of 225 feet.
3. Wetlands outside of the core wetland complexes and the headwaters of Ginder Creek and Lawson Creek provide important hydrologic functions. Their ability to provide productive wildlife habitat for a variety of species will be limited by future urbanization. It is appropriate for the city to recognize tradeoffs between Urban Growth area goals of providing for housing and economic development by lower standards of protection. In recognition of their lower productivity, opportunities for transfer of buffer area to the core wetland system also are appropriate to provide the greatest variety of functions in that central location.

Recommended buffers are found in Table 7-1:

**Table 7-1. Recommended Wetland Buffers**

Wetland Category	CORE and Headland	Standard Buffer	Minimum Buffer with Transfer to Core Wetland Complex
Category IV	225 feet	50 feet	30 feet
Category III	225 feet	80 feet	50 feet
Category II	225 feet	150 feet	100 feet
Category I	225 feet	180 feet	125 feet

These buffer reductions, however, should be considered only when adjacent lands and adjacent development have appropriate natural and built features to protect wetland functions. These should include:

- (a) The buffer must have topographic and vegetation characteristics that ensure adequate function, including intact soils, limited topographic slope and dense native vegetation, including understory.
- (b) Adjacent land use should not include high intensity uses such as commercial, industrial or high intensity multi-family and also should avoid high intensity recreational uses such as sports fields that have considerable loadings of fertilizers





# WASHINGTON DEPARTMENT OF FISH AND WILDLIFE PRIORITY HABITATS AND SPECIES REPORT

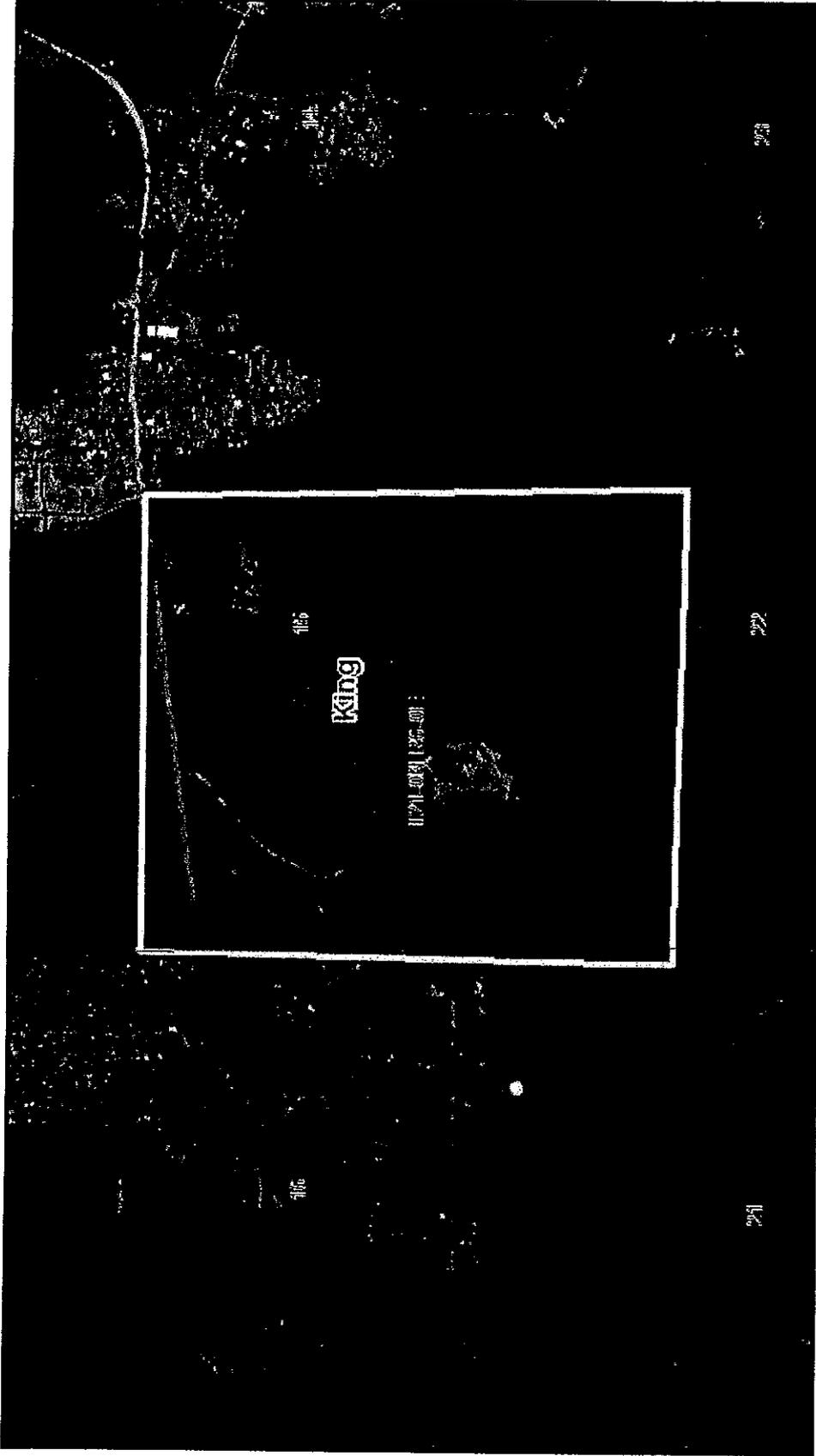
SOURCE DATASET: PHSPplusPublic      Query ID: P130614145645  
 REPORT DATE: 06/14/2013 2:57 PM

Common Name Scientific Name	Site Name Source Dataset Source Record Source Date	Priority Area Occurrence Type More Information (URL) Mgmt Recommendations	Accuracy	Federal Status State Status PHS Listing Status	Sensitive Data Resolution	Source Entity Geometry Type
Caves Or Cave-rich Areas	PHSPTS 902275	Habitat Feature Habitat Feature	1/4 mile (Quarter)	N/A N/A	Y TOWNSHIP	WA Dept. of Fish and Wildlife Points
Coast Resident Cutthroat <i>Oncorhynchus clarki</i>	Rock Creek FISHDIST 12976	N/A Occurrence/Migration Occurrence/migration <a href="http://wdfw.wa.gov/wim/diversty/soc/soc.htm">http://wdfw.wa.gov/wim/diversty/soc/soc.htm</a> <a href="http://wdfw.wa.gov/publications/pub.php?id=00033">http://wdfw.wa.gov/publications/pub.php?id=00033</a>	NA	N/A N/A PHS LISTED	N AS MAPPED	WA Department of Fish & Wildlife Lines
Coho <i>Oncorhynchus kisutch</i>	Rock Creek SASI 3140	Occurrence Occurrence <a href="http://wdfw.wa.gov/wim/diversty/soc/soc.htm">http://wdfw.wa.gov/wim/diversty/soc/soc.htm</a> <a href="http://wdfw.wa.gov/publications/pub.php?id=00033">http://wdfw.wa.gov/publications/pub.php?id=00033</a>	NA	Candidate N/A PHS Listed	N AS MAPPED	WDFW Fish Program Lines
Coho Salmon <i>Oncorhynchus kisutch</i>	Rock Creek FISHDIST 12978	Breeding Area Breeding area <a href="http://wdfw.wa.gov/wim/diversty/soc/soc.htm">http://wdfw.wa.gov/wim/diversty/soc/soc.htm</a> <a href="http://wdfw.wa.gov/publications/pub.php?id=00033">http://wdfw.wa.gov/publications/pub.php?id=00033</a>	NA	N/A N/A PHS LISTED	N AS MAPPED	WDFW and/or LFA Reports, NWIFC Lines
Elk <i>Cervus elaphus</i>	GREEN/CEDAR RIVER PHSREGION 918540	Regular Concentration Regular concentration <a href="http://wdfw.wa.gov/publications/pub.php?id=00614">http://wdfw.wa.gov/publications/pub.php?id=00614</a>	General locality	N/A N/A PHS LISTED	N AS MAPPED	WA Dept. of Fish and Wildlife Polygons
PALLUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat <a href="http://www.ecy.wa.gov">http://www.ecy.wa.gov</a>	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
PALLUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat <a href="http://www.ecy.wa.gov">http://www.ecy.wa.gov</a>	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons

Common Name Scientific Name	Site Name Source Dataset Source Record Source Date	Priority Area Occurrence Type More Information (URL) Mgmt. Recommendations	Accuracy	Federal Status State Status PHS Listing Status	Sensitive Data Resolution	Source/Entity Geometry Type
PALUSTRINE	N/A NWIPOLY	Aquatic Habitat Aquatic habitat <a href="http://www.ecy.wa.gov">http://www.ecy.wa.gov</a>	NA	N/A N/A PHS Listed	N AS MAPPED	US Fish and Wildlife Service Polygons
Steelhead Oncorhynchus mykiss	Rock Creek SASI 6175	Occurrence Occurrence <a href="http://wdfw.wa.gov/wlm/diversity/soc/soc.htm">http://wdfw.wa.gov/wlm/diversity/soc/soc.htm</a> <a href="http://wdfw.wa.gov/publications/pub.php?id=00033">http://wdfw.wa.gov/publications/pub.php?id=00033</a>	NA	Threatened N/A PHS Listed	N AS MAPPED	WDFW Fish Program Lines
Steelhead Trout Oncorhynchus mykiss	Rock Creek FISHDIST 12980	Occurrence/Migration Occurrence/Migration <a href="http://wdfw.wa.gov/wlm/diversity/soc/soc.htm">http://wdfw.wa.gov/wlm/diversity/soc/soc.htm</a> <a href="http://wdfw.wa.gov/publications/pub.php?id=00033">http://wdfw.wa.gov/publications/pub.php?id=00033</a>	NA	N/A N/A PHS LISTED	N AS MAPPED	WDFW and/or LFA Reports, NWIFC Lines
Wetlands	GREEN RIVER WETLANDS PHSREGION 902525	Aquatic Habitat N/A <a href="http://www.ecy.wa.gov">http://www.ecy.wa.gov</a>	1/4 mile (Quarter)	N/A N/A PHS LISTED	N AS MAPPED	WA Dept. of Fish and Wildlife Polygons
Wetlands	SOOS CREEK WETLANDS PHSREGION 902538	Aquatic Habitat N/A <a href="http://www.ecy.wa.gov">http://www.ecy.wa.gov</a>	1/4 mile (Quarter)	N/A N/A PHS LISTED	N AS MAPPED	WA Dept. of Fish and Wildlife Polygons

DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.

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## Study Area Diagram

BOUNDING BOX: -13586993,5990826,-13581953,5993586  
(web mercator meters)

Query ID: P130614145645

06/14/2013 2:57 PM

Colin Lund <clund@yarrowbayholdings.com>

July 12, 2012 11:31 AM

to:

Scott E. Vanard (scott@westlandresources.com) (mailto:scott@westlandresources.com)

FW: Use of The Villages property by area residents

**From:** Steve Pilcher [mailto:SPilcher@ci.blackdiamond.wa.us]

**Sent:** Thursday, July 12, 2012 11:31 AM

**To:** Colin Lund

**Subject:** Use of The Villages property by area residents

Colin:

Per our discussions yesterday, this is to confirm that on a typical workday, City staff observes private vehicles parked at the primary entrance to the site along Auburn-Black Diamond Road (i.e., at the gate). Both myself and Natural Resources Director Aaron Nix commute to communities located to the west of Black Diamond, so we use this route on a daily basis. On most days, even in inclement weather, it is not unusual to find vehicles parked at this location.

We have observed some individuals departing from this point to walk their dogs on the site, presumably using the existing road system. Individuals may also be using the site for other purposes, as there have been reports of firearms discharge, noise from ATVs, etc.

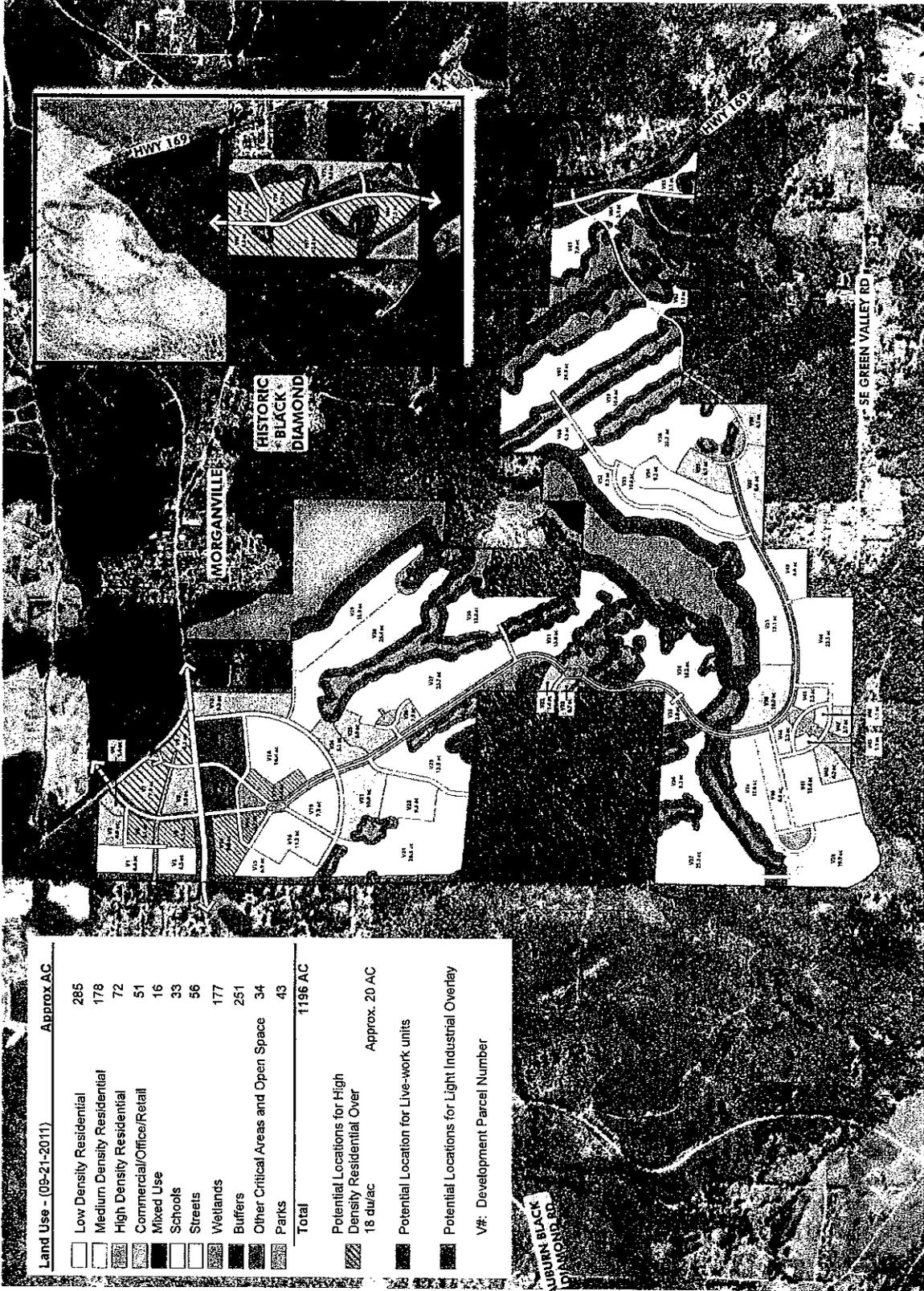
***Steve Pilcher***

***Community Development Director***

***City of Black Diamond***

***360-886-5700***





Land Use - (09-21-2011)	Approx AC
Low Density Residential	285
Medium Density Residential	178
High Density Residential	72
Commercial/Office/Retail	51
Mixed Use	16
Schools	33
Streets	56
Wetlands	177
Buffers	251
Other Critical Areas and Open Space	34
Parks	43
<b>Total</b>	<b>1196 AC</b>
Potential Locations for High Density Residential Over 18 du/ac	Approx. 20 AC
Potential Location for Live-work units	
Potential Locations for Light Industrial Overlay	
V#: Development Parcel Number	





# REVISION/CORRECTION SUBMITTAL FORM

**Submittal Requirements:**

All revisions / correction submittals **MUST** contain the following:

1. A completed City of Black Diamond Revision/Correction submittal form
2. Two (2) sets of revised and/or corrected drawings/sheets (wet stamped by architect, if applicable).
3. Revised structural calculations, if applicable (must be stamped by engineer)
4. A written letter to the City that shows an itemized summary of your submittal (must include sheet and detail numbers)
5. All changes **MUST BE CLOUDED** or **HIGHLIGHTED** on each plan set

Date: 8/13/13

Permit #: PLN11-0001

Property Address: See The Villages MPD Preliminary Plat 1A  
 Project Name: The Villages MPD Preliminary Plat 1A  
 Contact Person: Colin Lund  
 Phone: (425) 898-2120  
 Email: clund@yarrowbayholdings.com

**TYPE OF SUBMITTAL:**

( ) **REVISION:** A change the applicant has made to a plan that is either:

1. An approved plan already issued by the City or
2. A project under current plan review

**CORRECTION:** An applicant response to a correction letter written by the City to the applicant

Permit Issued? ( ) Yes ( ) No \*A plan check fee for revision is \$84 per hour with a minimum of \$42 for ½ hour

Please describe revision/correction submittal:

Wildlife Corridor Connections letter & response memo dated 8/12/13 from WRL in response to City's review letter dated 7/15/13 in accordance with PPIA Condition #89.

Sheets Affected: N/A If more than two (2) sheets will be changed, please submit two (2) new full sets of plans. Revisions on issued permits only require submittal of the affected sheets.

**For City Use Only:**

REQ'D APPROVAL	CHECKED BY	ROUTE TO	DATE	INITIAL	COMMENTS	FEES
( )	1. BUILDING	_____	_____	_____	_____	_____
( )	2. PLANNING	_____	_____	_____	_____	_____
( )	3. FIRE	_____	_____	_____	_____	_____
( )	4. PW	_____	_____	_____	_____	_____
( )	5	_____	_____	_____	_____	_____

TOTAL \$



Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance

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

August 12, 2013

Stacey Welsh  
Community Development Director  
City of Black Diamond  
24301 Roberts Drive  
Black Diamond, WA 98010

**RE: Response to 7/15/13 Review Comments on The Villages MPD Phase 1A  
Preliminary Plat – Wildlife Memo**

Dear Ms. Welsh:

*Wetland Resources, Inc.* submitted to the City of Black Diamond a letter dated June 10, 2013 regarding Wildlife Corridor Connections in response to Condition of Approval # 89 of the City of Black Diamond Hearing Examiner's decision on The Villages MPD Preliminary Plat 1A. In response to the submitted Wildlife Corridor Connections letter, a memorandum prepared by Jason Walker of Perteet (dated July 12, 2013) was sent to the Applicant. The memorandum arrived as an enclosure within a City of Black Diamond review comment letter (dated July 15, 2013). This letter shall serve as a formal response to the Wildlife Corridor Connection review comments only. The following narrative re-states all original review comments (indented and italicized), and provides a response that includes a reference to the location in the Wildlife Corridor and Connections letter where the revision can be found.

**Response to the City's July 15, 2013 review comments**

1. *Drive back to the documents and requirements in existence.*
  - a. *Plat condition 2 requires split-rail fencing for wetland buffers.*
  - b. *MPD condition #122 requires native vegetation in street landscaping and parks.*
  - c. *Address how corridors identified by King County Wildlife Networks are protected as sensitive area tracts: Tracts 953, 985 and 997 in the plat are for sensitive areas.*
  - d. *Reference Exhibit G of The Villages Development Agreement (constraints map) and MPD condition of approval #125. Exhibit G shows a 300' wildlife corridor already established for the project.*

Response:

The attached WRI memo no longer mentions split-rail fencing or native vegetation within landscaping areas since Perteet's review memo states that these measures would not serve to connect the habitats of the subject wetlands. The attached WRI memo has been modified to

address how corridors identified by King County Wildlife Networks are protected in sensitive area tracts. In addition, the WRI memo now references Exhibit G to The Villages MPD Development Agreement and The Villages MPD Condition of Approval # 125.

2. Provide a current curriculum vitae for Mr. Brainard.

Response:

Mr. Brainard's current curriculum vitae is attached.

**Response to Perteet, July 12, 2013 memorandum review comments**

1. *Under Condition of Approval #89 and the new SEPA mitigation measure (added condition no. 9) of the City of Black Diamond Hearing Examiner's Decision on The Villages MPD Preliminary Plat 1A, the applicant was required to prepare an analysis to: 1) assess whether any wildlife corridor connections between wetlands S, T, D4, and E1 have any significant environmental benefit, and 2) identify any measures to connect those wetlands that are reasonably feasible. In reviewing the applicant's response to this issue, we concur that wildlife corridor connections between wetlands S, T, D4 and E1 are negligible since significant habitat corridors and connections have been documented by King County and by the City under their Sensitive Areas Ordinance Best Available Science (BAS) and do not include connections between these wetlands. Our recommendation to the City is that the first criterion of Condition # 89 has been met and that habitat connections between wetlands S, T, D4 and E1 do not have significant environmental benefit compared to others defined by King County and under the City BAS.*

Response:

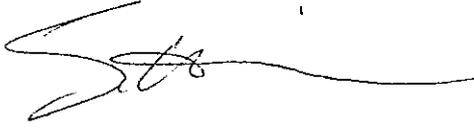
Noted -- No change requested.

2. *The second requirement to distinguish reasonableness or feasibility of any measures to connect wetland habitats that may provide a significant environmental benefit has not been met by the applicant's response. On Page 2 of the response, the consultant for the applicant states: In order to provide habitat connection benefits, WRI recommends that measures be taken to allow wildlife to move more freely between these wetland areas. Specific recommendations include: using two-rail fencing along the boundaries of any critical area tracts, planting primarily native vegetation within landscaping areas, and ensuring that the corridors identified by the King County Wildlife Networks be protected in perpetuity as critical area tracts. The habitat benefit of fencing, providing native vegetation, and preservation of identified corridors would not serve to connect the habitats of the subject wetlands. Supplemental information as to why it is practical or impractical to connect Wetlands S, T, D4, and E1 with a habitat corridor is needed.*

Response:

The attached WRI memo has been modified to include supplemental information as to why it is impractical to connect Wetlands S, T, D4 and E1 with a habitat corridor.

*Wetland Resources, Inc.*

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

Scott Brainard, PWS  
*Principal Ecologist*



### Education

B.S., Environmental Policy and Impact Assessment, Western Washington University, 1993

### Certifications

Certified Professional Wetland Scientist - # 1743

### Advanced Training

USACE Northwest Regional Nationwide Permits, USACE

Advanced Hydric Soils, SPU

Management of Invasive Plants, PSU

Classifying Wetlands Using HGM, PSU

Wetlands and Upland Restoration, UW

Geology and Geomorphology of Streams, UW

Electrofishing Training Course, USDFW & Smith Root, Inc.

How to Determine Ordinary High Water Mark, WA DOE

WA State Wetland Rating System for Western Washington, WA DOE

Arid West Supplement Delineation Manual, Wetland Training Institute

WA State Wetland Rating System for Eastern Washington, WA DOE

### Expert Witness

#### Testimony

Villages and Lawson Hill SEPA and MPD Hearing, Black Diamond, WA

### Carpenter Heights

Subdivision Hearing, Snohomish County, WA

Scott holds a Bachelors degree in Environmental Policy and Impact Assessment from Huxley College, Western Washington University, and is a Certified Professional Wetland Scientist and an active member of the Society of Wetland Scientists. Scott's 20 years of experience working with the private and public sectors make him particularly sensitive to the needs of utility purveyors, the development community, homeowners, and local jurisdictions. Scott's training, skills, and strong working relationships with clients and regulators proves invaluable in permit acquisition and compliance on the local, state, and federal level. Scott's primary responsibilities include project management, wetland reconnaissance/feasibility, permit coordination, delineation, construction supervision, mitigation planning, wetland creation and construction design, ecological and aquatic resource monitoring, wildlife analysis, and technical report writing.

### TECHNICAL EXPERTISE

#### *Wetland and Stream Identification, Delineation and Evaluation*

- Feasibility Studies and Wetland, Stream and Wildlife Reconnaissance
- Wetland Delineation utilizing the USACE 1987 Wetland Identification and Delineation Manual, the 1997 Washington State Department of Ecology Wetland Identification and Delineation Manual, and the USACE Interim Regional Supplement for Western Mountains, Valley, and Coast Region
- Wetland Rating and Categorization utilizing Washington State Department of Ecology Rating System and individual local jurisdictional rating systems
- Functions and values analyses utilizing the multiple methodologies available for Washington State

#### *Mitigation Planning and Design*

- Development of wetland, buffer, and stream mitigation plans for compliance with local, state and federal regulations
- Planning and design includes establishing goals, objectives, performance standards and monitoring protocols
- Projects are often evaluated through construction supervision and performance monitoring period

#### *Ecological and Aquatic Resource Monitoring*

- Monitoring of existing conditions as well as post-action objectives
- Braun-Blanquet or similar methods to the protocols described by the Salmon Recovery Funding Board (SRFB), April 2004
- Effective use of established methodologies for defensible results