

2018-09-17

Dave Reid  
Operations Manager, City of Grand Forks  
250-442-8266  
[dreid@grandforks.ca](mailto:dreid@grandforks.ca)

Re: Project to remove trees by Grand Forks airport to construct a road on existing road right-of-way.

Mr. Reid

Thank you for meeting me on site to explain the proposed project. After our meeting I surveyed the trees on the existing road right of way where removal is planned to document wildlife usage and habitat values. Considering several federal and provincially listed bird species could potentially be using the trees (Lewis's woodpecker and Western Screech owl) it is important to identify and assess potential impact of tree removal on habitat values for these species and other more common wildlife species to enable retention of important habitat features. A wildlife tree typically provides a unique feature that is used by wildlife. An example is presence of excavated nest cavities, heavy branches or dense foliage to support platform nesting raptors or owls, broken tops or other unique features that wildlife species depend on for successful reproduction or improve foraging potential by providing a vantage point higher than the tree canopy.

On the project site the stand of ponderosa pine trees (*Pinus ponderosa*) has a mix of age classes but overall is a fairly young stand with extensive ingrowth due to fire suppression (picture 4). Forest ingrowth is a common issue in the Ponderosa Pine bunchgrass Biogeoclimatic Zone in our area as a result of history of fire suppression that can be addressed through better management practices. A healthy high value stand of trees in this hot dry valley bottom site would be widely spaced clumps or individual trees of mature ponderosa pine (<40 dbh) with some dead or defect trees (broken top, spike top, presence of rot) with an understory of primarily bunchgrass and a few widely spaced shrubs. I did observe a small amount of woodpecker feeding on some larger trees within the retention area along with a couple larger broken top trees (picture 3). I did not observe any obvious wildlife use on trees within the road right-of-way. There are invasive weeds in the non-forested portions of the road right-of-way that will be removed as the road surface is built (Picture 5).

The habitat value of the stand on the road right-of-way currently is low since the stand is young (Picture 1 and 2), canopy is open, the trees have not yet matured sufficiently to provide unique features like heavy branches or rot pockets in the stems, and there is no evidence of excavated nests or platform nests. There are a few large diameter trees (>40 cm dbh) on the road right-of-way that will be removed by the project that would be considered future recruitment wildlife trees. It takes a long time to grow a large tree so considering future wildlife tree recruitment is important. As they mature they would have become more valuable to wildlife so the complete tree removal on the road right-of-way will have a small long-term impact. All the small diameter trees on the road right of way are of low habitat value and should be removed to create a

# Kettle Ecological

healthier stand of trees by reducing stem density. Since the road development will be limited to the 20 m right of way it will leave a significant portion of the tree stand intact (retention area).

There are far too many trees on the site and thinning should be done in the retention area off the right-of-way as the road is built. Removal of the small understory trees in the retention area will not only improve wildlife habitat values it will also reduce risk of a crown fire.

Based on my survey I am providing the following recommendations:

1. After the road is constructed all disturbed areas beyond the road surface should be revegetated with suitable drought resistant grass mix to prevent establishment of invasive plants. Specific recommendations have been provided in a separate email.
2. Habitat improvement should be undertaken within the retention area to remove young ingrowth and create coarse wood debris. This should include removal of all trees with a diameter at breast height (dbh) of less than 7 cm dbh and removal of 90% of the trees between 7 cm and 30 cm dbh. This should remove about 80% of the stems from the site opening up the canopy to release the grasses and forbs growing in the understory. The 10% of trees between 7 cm and 30 cm dbh to be retained should be the ones located in proximity to or within clumps of larger trees being retained to create a clumpy distribution. A few medium diameter trees harvested from the road right-of-way should be placed as coarse woody debris in the retention area to create habitat for snakes and small mammals. Ensure the equipment operators do all work in the retention area in a manner to minimize damage to trees and soil disturbance. There is a large opening between tree clumps within the current loop road where a few small ponderosa pine should be planted or transplanted. This opening was likely a result of previous construction work.
3. To compensate for the loss of the large trees on the new road right of way I am recommending an offset planting of the equivalent area (145 m x20 m) (0.28 ha) be completed along the Kettle or Granby rivers to restore valuable habitat at another location. The offset planting site should be an area that had historical tree clearing along the river and involve planting to establish a native tree and shrub community to provide future habitat for a large variety of bird species. Successful restoration planting requires not only planting but also protection from browsing and girdling in addition to watering for the first couple years to give the trees and shrubs a good start in our hot dry climate. Specific details on the offset planting would need to be provided once a suitable location is selected.

Sincerely,



Barb Stewart  
BSc, RP Bio # 1835  
Kettle Ecological

# Kettle Ecological

---



Picture 1. Young trees along road right of way to be harvested (looking east)



Picture 2. Young clump along road right of way on east end looking west.



Picture 3. Higher value broken top tree in the retention area.



Picture 4. Young tree in-growth in the retention area that should be removed.

## Kettle Ecological

---



Picture 5. Invasive plants on existing road right of way that will be removed by construction of the road.