

June 9, 2005

To: Robin Sharples, Environmental Assessment Coordinator
Yukon Government Energy Mines and Resources

From: Sue Kemmett, Forest Ecologist/Certification Coordinator
Karen Baltgailis, Forestry Coordinator

Re: Fire Salvage Project for False Canyon Creek and Barney Lake Fires, 2004

Dear Robin,

Thank you for the opportunity to provide recommendations for the screening of the Barney Lake and False Canyon Creek Salvage Projects.

We have serious concerns about this proposal. Areas affected by natural disturbances require as much care in planning as unburned forests. The information provided is much too vague to constitute a Development Plan, and is in no way adequate for a proposal of this scale. The proposed volume is approximately the same as for the entire three years of Interim Wood Supply, and yet there is no serious discussion of what the requirements will be for block layouts, in-block retention, how much coarse woody material to leave, etc. We are not necessarily suggesting that individual block layouts need to be provided, since it is possible that there may not be interest in logging this wood. However, much more explicit direction must be provided. For example, vague references to 10 – 50% retention of un-merchantable or green trees do not suffice.

It is not clear what was included in the process of netting down the total volume that is available in all operating units (446,000 cubic metres) to 302,000 cubic metres. Since only one third of the total available volume was net down, it seems likely that final blocks will be large and that retention levels will be low.

This is the first proposed logging that falls outside of the Interim Wood Supply Plan. There is no longer any excuse for anything except true ecosystem-based planning. As proposed the False Canyon Creek logging would impact the entire 90 km area of the burn, since the blocks are distributed throughout it. The False Canyon Creek plan needs to include a substantial set-aside in this burn area – ‘travel corridors’ that are just breaks between blocks are helpful but do not provide intact, natural burn habitat. Furthermore, the long term planning is meant to include adaptive management – it is difficult to monitor the results of logging without a substantial control area.

The control area should be chosen while considering:

- The consultation with the local land steward and people who live in the area,
- How to minimize access
- How to protect areas where there are many riparian features, i.e. wetlands, the Francis River and other smaller perennial and intermittent streams, and
- How to protect other important wildlife use areas

The impacts on the forest from logging dead trees or logging live trees are equally important. In-block retention is equally important in burned and unburned areas. Riparian zones should be planned in the same way whether the forest has been burned or not. Access is an equally critical issue in both burned and unburned forest.

It is appropriate that the proposals call for following the Timber Harvest Planning & Operating Guidebook regarding the protection of wetlands and other riparian ecosystems. However, it is disturbing that at other points in the documents the suggestion is made that some logging may be allowed in the riparian management zones. There is absolutely no need or excuse for logging in the riparian buffers.

Regarding how the volume of wood derived from salvage should interplay with the greenwood harvest (page 2): we believe that there should be a consistent AAC for the Kaska Traditional Territory that is inclusive of salvage or green harvest. During those years when there is salvage wood available, it should be used before the harvest of green wood.

Recommendations for the Barney Lake Fire

Concern 1: Insufficient Information for a Development Plan

This document does not provide enough detail to be considered a Development Plan. As stated on page 5 it does not even have comparable available information to the False Canyon Creek Fire. For example, there is no information provided regarding fire skips, severity of the fire, and the boundaries on the map are clearly only approximate.

Recommendation:

- The Environmental Assessment of the Barney Lake Fire salvage should be postponed until there is sufficient information to constitute a Development Plan to allow meaningful assessment by reviewers.

Concern 2: Low volume units should not be harvested:

Some of the information that actually is provided is contradictory. Table 1 on page 5 shows Units 1 and 3 as only having 57 m³/ha. This contradicts the table in the Reconnaissance Report in Appendix 3, which estimates the average volume as 200 m³/ha based on yield tables and forest cover data. One assumes that the information in Table 1 is more up to date. It is highly questionable whether 57 m³/ha warrants the costs of road building and harvesting, especially since neither Units 1 or 3 have significant areas of

stands that are more than 17 m. tall. The length of the road required for Unit 3 (almost 15 km) makes this unit especially un-economical.

Recommendation:

- Delete Units 1 and 3 due to low wood volumes, and insufficient timber over 17 m tall.

Concern 3: Representative Retention on Harvest Blocks:

In recognition of the significant limitations placed upon the interim harvest planning that has been recently occurring in the Kaska Traditional Territory, i.e. the presence of existing harvest blocks, the recommendations that the Yukon Conservation Society has made regarding interim harvest planning have been geared towards the practical reality of planning in a place where there isn't a lot of flexibility.

Now that the interim planning is completed for the Kaska Traditional Territory, it is time to use thresholds which are ecologically based. The Forest Stewardship Council National Boreal Standard (6.3.10) calls for a minimum of 25% retention when harvesting during normal *and salvage* operations. The retention must be representative of size, species and condition of the pre-logged stand, to allow the woody structures that are retained to fulfill their ecological function (i.e. wildlife habitat, nutrient cycling, water storage).

Recommendation:

- Each harvest block should have a minimum of 25% retention that is representative of the species, size and condition of the pre-logged/post-fire stand.

Concern 4: Winter logging only;

On page 2 under Criteria, the document states that winter logging is the *preferred* season of operations. Logging in the winter minimizes soil disturbance, protects small streams and wetlands that aren't apparent at this scale of mapping and minimizes damage to the understory and other forest structures. Especially after a fire the forest floor is sensitive to disturbance.

Recommendations:

- All harvesting operations, including hauling, should occur during the winter when there is sufficient frost in the ground.
- However, layout should occur during the snow-free season so as to be able to see small and intermittent stream channels.

Concern 5: Determinations of Future Mortality

On page 6 under Development Plan Guidelines, the document discusses determining if a stand has enough dead trees to be logged. It is not clear by whom or how it will be determined which trees will live longer than 10 years and remain windfirm, and therefore will not be cut.

Recommendations:

- Clarify who will make the above determinations of whether the tree will live at least another ten years and remain windfirm.
- Clarify how this determination will be made. How will you account for the fact that harvesting trees in a stand will affect the windfirmness of the remaining trees?

Concern 5: Coal River Special Management Agreement (SMA):

Consideration for the proposed Coal River SMA is not referenced in the document.

Recommendations:

- Update the maps with the location of the proposed Coal River SMA.
- Allow for a minimum of 200 metre buffer between the SMA and the Barney Lake Operating Units.

Recommendations for the False Canyon Creek Fire**Concern 1: Insufficient information for a development plan:**

There is no serious discussion of what the requirements will be for block layouts, in-block retention, how much coarse woody material to leave, etc. We are not necessarily suggesting that individual block layouts need to be provided, since it is possible that there may not be interest in logging this wood. However, much more explicit direction must be provided. For example, vague references to 10 – 50% retention of un-merchantable or green trees do not suffice.

As proposed the False Canyon Creek logging would impact the entire 90 km area of the burn, since the blocks are distributed throughout it. The False Canyon Creek plan needs to include a substantial set-aside in this burn area – ‘travel corridors’ that are just breaks between blocks are helpful but do not provide intact, natural burn habitat. Furthermore, the long term planning is meant to include adaptive management – it is difficult to monitor the results of logging without a substantial control area.

Recommendation:

- Provide more information about in-block retention requirements, block size limits, a substantial set-aside, what information goes into designing wildlife travel corridors, etc.

Concern 2: Logging in Areas with Low Levels of Burn or in Sensitive Areas

According to Map 6, a substantial portion of operating Units 1, 2, 3 and 4 have only been burned partially (less than 25% of vegetation consumed by the fire). This is not surprising as all of these units are at the edge of the fire. As such, they are critical for re-colonization by small mammals and vegetation. The abundance of small mammals in these areas that were minimally burned will support predator species like marten. Since

these areas are also relatively close to the Frances River, they provide natural connectivity to the river.

The standing dead trees in areas that have been less severely also play a critical role in the regeneration of the burned forest. For example, large standing dead trees provide habitat for bird species such as woodpeckers and subsequent secondary cavity nesters. When the trees fall over or break off they capture, store and then slowly release water.

Units 1, 3 and 4 are also close to the Frances River or adjacent to other significant mapped riparian areas. Since these units represent a transition from unburned forest to variably burned forest it is likely that they have high value as wildlife habitat.

Recommendations:

- Remove operating units that are mapped to illustrate less than 25% consumption (Operating Units 1, 2, 3 and 4).
- Remove operating units that are close to the edge of the fire and close to the Francis River and other significant riparian areas (Operating Units 1, 5, 13, 14).

Concern 3: Representative Retention on Harvest Blocks

As with the Barney Lake assessment, we believe that now that the interim planning is completed for the Kaska Traditional Territory, it is time to us to recommend thresholds which are ecologically based. The Forest Stewardship Council Boreal Standard (6.3.10) calls for a minimum of 25% retention when harvesting during normal and salvage operations. This retention, if it is representative of size, species and condition of the pre-logged stand, will allow the retained structures to fulfill their ecological function (i.e. wildlife habitat, nutrient cycling, water storage).

To maintain mammalian diversity Fisher and Wilkinson (2005) recommend that more than 30% of mature and old live trees are retained in a clumped distribution on harvest blocks.

Woody material that is on the ground plays an important role in the regeneration of the burned forest by providing critical habitat for small mammals. Small mammals are instrumental in dispersing seeds and mycorrhizal fungi back into the burned forest, as well as being prey for predators such as marten.

Recommendation:

- Each harvest block should have a minimum of 25% retention that is representative of the species, size and condition of the pre-logged/post-fire stand.

Concern 4: Insufficient Map Data:

Map 6 does not show the area of forest that is unburned. Can we assume that all of the forest that is not tagged as being fully burned or partially burned is not burned? It would be interesting to see the fire severity that the riparian areas experienced.

Recommendations:

- Identify the extent of unburned forest on Map 6.
- Produce another map that shows the burn severity that occurred in the riparian areas.

Concern 5: Ice Bridge over Frances River

Is there documentation that the Frances River will freeze sufficiently hard and for long enough for an ice bridge to be practical?

Concern 6: Connectivity Corridor

Landscape connectivity through a series of connectivity corridors in the False canyon Creek fire is essential, particularly for wildlife movement to and from the Francis River. It looks like the proposed connectivity corridors are mostly following the riparian reserves; this is a great first step. Now the connectivity corridors need to be expanded to meet wildlife habitat and water quality/quantity objectives. To allow reviewers to evaluate their effectiveness of the connectivity corridors further information is required. .

Recommendations:

- To allow reviewers to effectively evaluate the connectivity corridors, provide information related to the objective of the corridor and what the corridor is supposed to be connecting.
- To confirm the effectiveness of the connectivity corridor, speak to people who live in the area. The Department of Environment has a trappers' focus group that could provide valuable information into the final design of the connectivity corridor. The local Land Steward and Yukon government Department of Environment will also provide valuable information.

Concern 7: Clarity required on item 3 on page 6

It is not clear what the second sentence of this point means.

Concern 8: Deviations from the Development Plan

The last paragraph on page 8 states that some deviations from the Development Plan are expected at the operational level. The Development Plan is general enough that there should be no need for deviations. In particular there is no reason why the riparian buffers in the THPOG should not be followed at all times. A very large volume of timber is available in this burn, more than half of which is in stands with more than 100m³/ha. The operating units are in areas with many streams and wetlands, meaning that this is an ecologically important and sensitive area. Operators may be tempted to log in the riparian buffers, but it is important that they don't.

Recommendations:

- Operators should be give explicit instructions to respect the riparian buffers in the THPOG at all times.
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Concern 9: Determinations of Future Mortality

On page 9 the fourth bullet discusses how to determine if a stand has enough dead trees to be logged. It is not clear who or how it will be determined which trees will not live longer than 10 years and not remain windfirm.

Recommendations:

- Clarify who will make the above determinations of whether the tree will live at least another ten years and remain windfirm.
- Clarify how this determination will be made. How will you account for the fact that any harvesting trees in a stand will affect the windfirmness of the remaining trees?

Concern 9: That the 2004 Fire Season Provides Habitat for Fire Specialist Species

Section 10 describes how the magnitude of the 2004 fire season provides adequate habitat for species that are specifically adapted to living with fire. It is true that the area burned in the False Canyon Creek fire is a small percentage of the entire Kaska Traditional Territory. However, the fire specialist species in the southeast Yukon do not range through the entire Kaska Traditional Territory. All species have smaller areas that they range over and so the reference point for evaluating whether they have adequate habitat is also much smaller. If approximately half of the False Canyon Creek fire is proposed for logging and the logging does not incorporate appropriate requirements for retention and appropriate harvest practices, as well as connectivity corridors and areas that are not logged, there will be an effect on wildlife habitat which will directly affect wildlife.

In order to maintain sufficient habitat for fire specialist wildlife, it is critical to maintain representative in-block retention. The Forest Stewardship Council Boreal Standard requests that at least 25% of retention is maintained in the block; retention should be representative of the size, species and condition of the trees that were present before logging. To maintain mammalian diversity, Fisher and Wilkinson (2005) recommend that more than 30% of mature and old live trees are retained in a clumped distribution on each harvest block.

Recommendations:

- Design and implement a series of objective-driven landscape connectivity corridors for the False Canyon Creek burn.
- Maintain 25% retention in each block. Retention should be representative of the size, species and condition of the post-fire-pre-logged stands.

References

Fisher, Jason, T. and Lisa Wilkinson. 2005. The response of mammals to forest fires and timber harvest in the North American boreal forest. *Mammal Rev.* 35(1):51-81.

Forest Stewardship Council Canada Working Group. 2004. National Boreal Standard. See pages 75-76 and also the Principle 6 Intent Box on page 62 (in the August 2004 Final Version).