

1999 FEBRUARY 10

TO: CITY MANAGER
FROM: DIRECTOR PARKS, RECREATION & CULTURAL SERVICES
SUBJECT: PINE BEETLE INFESTATION - FRASER LAKE, B.C.
PURPOSE: To provide Council with information regarding the Pine Beetle infestation in Tweedsmuir Provincial Park

RECOMMENDATION:

1. THAT this report be received for information purposes.

REPORT

At its meeting of 1999 January 18, Council received the attached letter from Elaine Casey of Garibaldi Highlands, B.C. requesting that all concerned citizens of British Columbia including all municipalities in B.C. lobby the provincial government to permit the harvesting and sale of diseased or bug infested trees within provincial parks. The request arises from the understanding that a pine beetle infestation within a large area of Tweedsmuir Provincial Park near the community of Fraser Lake, B.C. is scheduled to be burned under the guidance of the Ministry of Environment, Lands & Parks to stop the spread of the insect. There is concern that this is a waste of harvestable timber, a health risk resulting from large amounts of smoke produced during the burn and the loss of an employment opportunity for many people.

Tweedsmuir Provincial Park is a Class A Provincial Park covering almost 1 million hectares. The Eutsuk Lake Nature Conservancy is contained within the park. The park Master Plan completed in 1988, following full public review, states that " the east end of Eutsuk Lake will remain undeveloped with no road access to protect its wilderness values". In addition, the objective for natural resource management as described in the plan is to ensure the protection of biodiversity, natural processes and the wilderness nature of the park.

Portions of Tweedsmuir Provincial Park are affected by the indigenous mountain pine bark beetle (*Dendroctonus ponderosae*). They are an important enemy of older mature conifers, especially pines. The primary host of this insect in Tweedsmuir Provincial Park and surrounding areas is the Lodgepole Pine (*Pinus contorta* var. *latifolia*).

Beetles tunnel through the bark into the phloem and xylem (wood) tissues excavating extensive galleries for the rearing of the next generation of beetles. In addition the beetles introduce a fungus that effectively plugs the conductive tissue of the affected tree. Although beetles are initially attracted to over-mature and weakened trees, they will also attack and kill healthy trees as an infestation grows. This insect also impacts ponderosa pine, white pine and whitebark pine. Impact on lodgepole pine is particularly noticeable due to this species habit of growing in pure stands. Regeneration of lodgepole pine and control of pests and diseases that affect it, is controlled by natural fire cycles. The cones of lodgepole pine remain closed for years until the heat from a fire event permits the release of seed. Dense pure stands of this species then develop rapidly to re-colonize the landscape.

The mountain pine bark beetle has been present in Tweedsmuir Provincial Park for several years. In 1994, the Canadian Forest Service (*Forest Insect & Disease Survey*) and the B.C. Forest Service (*Lakes District*) detected extensive mountain pine beetle activity in northern Tweedsmuir Park, 4 km from the eastern boundary over an estimated area of 5000 hectares. Concern that the infestation would spread beyond Park boundaries into commercial timber and the effect the infestation may have on the Tweedsmuir - Entiako caribou population were major considerations in the development of treatments to manage the infestation. Several hundred caribou summer in northern Tweedsmuir Park and migrate through and winter outside the park in the Entiako and Tetachuck Lakes areas. Mature forests are an important winter habitat requirement for the caribou and it is the mature lodgepole pine stands that are most threatened by the beetle. Policies of active fire suppression within Tweedsmuir Park and on adjacent forest lands prior to 1990 has resulted in a landscape of primarily older aged forests. Mature lodgepole pine are most susceptible to mountain pine bark beetle.

No action would potentially result in losses to caribou habitat and to commercial forests next to Tweedsmuir Park. An increase in logging next to the park to harvest infested timber may have negative impacts on the Tweedsmuir-Entiako caribou population, migration corridor and winter range. Harvesting within the park may damage the wilderness character of the park, negatively impact caribou range and increase poaching and predator activity on the herd due to improved access. Conducting a large fire creates risk associated with fire escape.

Limited prescribed burns were considered the best alternative to balance the need to limit spread of the infestation while retaining and protecting park values. A strategy of small prescribed burns designed to mimic natural wildfires in the area was scheduled and undertaken in 1995, 1996 and 1997 by B.C. Parks, the Ministry of Forests and the Canadian Forest Service. The burns fit well with natural ecological cycles. They leave behind snags and downed logs for wildlife habitat and do not cause the disruption to the landscape inevitable with a logging and road building operation. Lack of fuel accumulation on the ground and unfavourable weather in 1996 limited the effectiveness of the treatment to the burn areas. The beetle population expanded and moved further east toward the park boundary and south across Eutsuk Lake.

To counter the expansion, four burns covering a larger area were proposed for 1998. The burns were scheduled to occur as close to beetle flight in July as possible to maximize effectiveness. However unsuitably dry weather of very low humidity prevented the burns from taking place as planned. As a result there has been a further significant expansion of the beetle infestation over an area of approximately 46,000 hectares.

Several committees are currently examining the issue to determine whether further control measures should be undertaken and what treatments, if any, will be undertaken in 1999. The area of concern within Tweedsmuir Provincial Park is untouched wilderness of significant scenic, wildlife and environmental value. It is an important and sensitive caribou habitat. The mountain pine bark beetle is an indigenous component of this ecosystem. The infestation and its effects are a natural occurrence which will end - thus beginning the next cycle - when the food source is exhausted, weather intercedes to interrupt the beetles life cycle or a natural or simulated fire event occurs. Following a fire event 40-60% of the standing timber, mostly young and vigorous trees, remain. These trees provide the canopy protection for the next generation of seedlings about to sprout from seeds just released from the heat of the fire. It can be expected that as these trees grow and mature, they too may become targets of the mountain pine bark beetle as the natural cycle continues.

Harvesting and processing the affected timber is a treatment that may be considered, amongst other alternatives including cut and burn. Although infested timber may be harvested without fear of spreading the infestation, prescriptive planning has not occurred mapping the full extent of the infested area and thus the volume of timber available for harvest, method of harvest, impact on the environment and wildlife and the scope of any resulting employment opportunities. Harvesting methods could range from high cost but lower environmental impact helicopter logging, to traditional ground based operations. A ground based harvest would likely entail a 3 - 4 month, \$2,100,000 road construction project to prepare approximately 100 kilometers of access and on-site roads. The leading edge of the bark beetle infestation has largely passed through the park to adjacent boundaries with commercial forests. The affected trees within Tweedsmuir Provincial Park are generally standing dead 'red' and 'gray' mature lodgepole pine. The beetles have flown from these trees and now infest live 'green' trees at the park boundary where commercial logging activity will likely accelerate this year to remove and process infested trees prior to beetle flight in July. It is estimated that approximately 70,000 cubic meters of timber will be harvested. Harvesting for processing the existing dead trees within the park may be of marginal economic viability due to the relatively low wood quality of these trees. It would largely amount to a salvage operation with uncertain return on investment.

Although the Ministry of Forests and B.C. Parks have not revealed plans to deal with the infestation in 1999 and beyond, the preferred solution may now be to conduct no further treatments. It likely is not economic to harvest the timber for processing while further burning could lead to a catastrophic fire. The complexity of this issue reveals significant challenges to the management of provincial parks and commercial forest lands.

A positive aspect of the Tweedsmuir bark beetle infestation may be the improved communication and understanding between the various stakeholders in our provincial parks and forest lands.



KATE FRIARS
Director Parks, Recreation &
Cultural Services

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Attachment

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Envelope Addressed:

Mayor & Council

9 December, 1998

To All Concerned Citizens in British Columbia.

On BC TV I saw a news article about the Pine Beetle kill near the community of Fraser Lake that upset me. The beetle has infested a large area of the park near that community and is spreading to the surrounding working forest. The only way to stop the spread of this pest is to eliminate the infested trees. The Ministry of Environment, Lands and Parks plans to do just that within the Park by burning it. THIS IS A CRIMINAL WASTE of our natural wood resource, and the large amount of smoke could provide a health hazard to the people in this area

It is my understanding that harvesting and selling these trees would result in nine years employment for many people. At a time when the forest industry is suffering from a lack of working forest and the Ministry of Parks does not have enough money to manage and maintain the protected areas, it seems that it is a double crime not to allow the utilization and sale of these trees. This is only one park of many that has the same problem.

I would, therefore, request that your community lobby the provincial government to allow the harvesting and sale of diseased or bug infested trees within our provincial parks. I have enclosed a petition for the general public to sign and would like for you to have it distributed in your community. I would greatly appreciate your cooperation in this matter. If you have any questions my address is:

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Yours truly,


Elaine Casey

cc: Premier Clark
David Zirnhelt – Ministry of Forests
Cathy McGregor – Ministry of Environment, Lands & Park
Ted Nebbeling – MLA
All municipalities in B.C.
Forest companies and coalitions

: COPY - CITY MANAGER

