

Jumbo Glacier Resort Master Plan

Appendix 3-G

Review of Horejsi (2000): The Purcell Mountains Grizzly Bear Cumulative Effects

Prepared by
ENKON Environmental Limited



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Pheidias Project Management Corporation
Suite 1660-1188 West Georgia Street
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Attention: Oberto Oberti
President

RE: REVIEW OF HOREJSI (2000): THE PURCELL MOUNTAINS GRIZZLY BEAR CUMULATIVE EFFECTS AND THE PROPOSED JUMBO GLACIER DEVELOPMENT

Dear Oberto:

Further to your request, ENKON Environmental Limited has reviewed the report entitled: "The Purcell Grizzly Bear: Cumulative Effects and the Proposed Jumbo Glacier Development" by Horejsi (2000) and have the following general and specific comments:

A) GENERAL COMMENTS

1. Horejsi's (2000) conclusions are significantly different than the analysis conducted by the province's grizzly bear specialist Matt Austin (2000).

Horejsi (2000) concludes:

- a) There will be physical and ecological loss of habitat;
- b) The risk of grizzly bear mortality will increase;
- c) The townsite/resort development and its highway corridor will fragment habitat;
- d) There is evidence that the highway access corridor and the development will create or aggravate a fracture which will present a barrier to movement that will behaviorally, demographically and/or genetically divide or isolate the bear population; and
- e) The cumulative effects of the Jumbo Glacier development, its associated highway corridor and expected regulatory changes will jeopardize the future of the Purcell Mountains Grizzly Bear Population.

Austin (2000) concludes:

- a) The proposed Jumbo Glacier Alpine Resort has the potential for substantial direct and cumulative impacts to the Central Purcell Grizzly Bear Population and to the ability to maintain effective linkages between the grizzly bear populations south of Jumbo Creek with grizzly bear populations to the north; and
 - b) Austin states that these impacts could be substantially addressed through a number of potential mitigative measures and provided that a comprehensive mitigation package was implemented may result in “no net impact” to the population.
- 2) The significant difference between the conclusions by Horejsi (2000) and Austin (2000) are likely associated with the following:
- a) Austin follows standard practises for assessing direct, indirect and cumulative impacts of a project development by accounting for reductions/elimination of impacts through the implementation of comprehensive mitigation measures. Horejsi fails to recognize or acknowledge that potential impacts from development can be reduced/eliminated through mitigative measures. Both the provincial (Environmental Assessment Act) and federal (Canadian Environmental Assessment Act) government review processes evaluate the effectiveness of proposed mitigation/compensation measures to reduce potential impacts from project development prior to rendering a decision;
 - b) Horejsi fails to recognize or follow the “Project Report Specifications” terms of reference (Section D.3(C) for assessing direct, indirect and cumulative impacts that the resort could have on the Central Purcell Grizzly Bear Population Unit. These terms of reference were prepared by the “Jumbo Glacier Project Committee” (1998) and reflect input from the province’s grizzly bear specialists and an independent consultant hired by the Environmental Assessment Office; and
 - c) The inability of Horejsi to accurately document the project scale/facilities and imply that the Jumbo Glacier development would inevitably result in the construction of the Jumbo Pass Highway is misleading and unprofessional. Accurate documentation of the project facilities has been available since the submission of the Project Application in 1995, while the Proponent has stated on numerous occasions they do not support the development of the Jumbo Pass Highway; and
 - d) Horejsi’s lack of understanding of the project scale and unsubstantiated speculation noted above, likely reflect both a personal bias and a bias

forwarded by the source of funding (i.e. Valhalla Wilderness Society and the Robert Schad Foundation) for preparation of the report.

B) SPECIFIC COMMENTS

The following specific comments represent a small fraction of the comments that could be provided, however, they do outline a number of basic discrepancies/inaccuracies that question the reliability of the results or conclusions of the report.

1) Summary Page ii: Horejsi provides a description of the project scale and facilities including:

a) Privatization of 200 ha (495 acres) of public land for private housing;

Volume 1-Project Application, Page 73: The single family dwellings (Phase 3) assuming an approximate area of an acre and a half to two acres per unit, to allow low density and substantial tree cover, will occupy an area of 350-500 acres, entirely in the logged areas to be replanted.

Since submission of the original Project Application in 1995, the project footprint has been scaled down to a total of 200-250 acres which includes the base village area and single family homes.

b) A townsite containing 5,500 bed units on 40 ha (99 acres);

Volume 1-Project Application, Page 55: The proposed project for Jumbo Creek by contrast is anticipated to start with a small development of 400 beds, to grow in stages to approximately 1,500 beds and to achieve maturity at around 3,000 beds. The project is designed for a maximum capacity of 6,500 beds for tourist, non-resident accommodation which it may or may not achieve over an indefinite period of time.

Volume 1-Project Application, Page 73: The only visible impact will be that of the village of about 70 acres at the center of the previous logging activity.

c) A 200 room lodge-hotel complex (Glacier Dome Lodge) at 1,900 m elevation;

Volume 1-Project Application, Page 65: The lodge is currently anticipated to include approximately 200 bedrooms with two beds each, of which approximately 130 will be traditional hotel rooms and the other 70 rooms that can be joined to form suites and be run according to time share management standards.

Volume 1-Project Application, Page 73: Glacier Dome Lodge and the lift station will occupy an area of less than 4 acres (Phase 1).

d) Development of up to 21 lifts and clearing of vegetation for 21 ski runs;

Volume 1-Project Application, Pages 89-105: This section of the report discusses the type and number of lifts envisioned through development of Phase 3. In total 20-25 lifts are proposed including two 6-10 person gondolas, one bi-cable reversible or pulsating aerial tram and a series of fixed grip/detachable grip chair lifts and t-bars.

Since submission of the Project Application in 1995, the tram/gondola that accesses the east side of Commander Glacier has been removed as have the detachable and fixed grip chair lifts near Jumbo Pass.

Although the number of ski runs has never been determined at this early stage of development planning, since significant portions of many of the ski runs are above the tree line, vegetation clearing is anticipated to be minimal for a significant portion of the ski runs. In addition, most of the proposed ski runs have already been cleared by R.K. Heli-Ski.

- e) A parking lot in Lower Jumbo Creek near its junction with Toby Creek;

The intent of the parking lot situated at the Mineral King Mine site was to reduce the volume of traffic along the access road to the resort base area, by using bus transportation in the initial stages of development.

However, since submission of the Project Application in 1995, the potential for bus transportation has been further evaluated and determined not to be desirable due to the reliance on personal vehicles of the North American ski market.

- f) Upgrading the existing dirt logging access road to all-weather highway standards;

Access to the resort would be from Invermere on an existing paved, two-lane road to Panorama Resort, from Panorama Resort to Mineral King Mine along an existing Forest Service Road and from Mineral King Mine to the base resort area along an existing Forest Service Road. The initial phase of development would upgrade the existing gravel access road with minor widening (2-3m) of some narrower sections. The final development phase of the project would see the existing Forest Service Road upgraded to a rural, paved, secondary remote resort highway with widening and relocation of some of the bridges over Jumbo Creek. McElhanney Consulting has been working with the Department of Transportation and Highways since submission of the Project Application in 1995 to negotiate more realistic highway standards and design speeds for the access road to allow use of the existing road alignment. If McElhanney is successful, the access road may follow the majority of the existing road alignment, reduce the number of bridge crossings and avoid a number of avalanche tracks, while at the same time reducing design speeds to 50-60 km. The lower design speeds would also reduce the potential for bear-vehicle collisions.

In addition, the access road is presently an all weather road as it is sometimes plowed in the winter to allow access for the heli-ski operator.

- g) Transfer of road access control and maintenance from the Ministry of Forests to the Ministry of Transportation and Highways, and thus further isolate the Ministry of Environment; and

The transfer of road access control and maintenance from the Ministry of Forest to the Ministry of Transportation and Highways is irrelevant as public access would not change. The Ministry of Environment, Lands and Parks would continue to have a significant role in review of the project and as recommended by the Proponent, actively participate as a member of the Grizzly Bear Management Committee as the project was developed.

- h) Sole proponent status for the development and developer.

As part of the provincial governments' "Commercial Alpine Ski Policy" review process, once a proposal from a Proponent has been accepted by the province, an "Interim Agreement" is negotiated between the province and the Proponent. The Interim Agreement gives the Proponent "Sole Proponent" status to allow the Proponent to prepare a ski area master plan. Glacier Resorts Ltd. acquired their Interim Agreement in 1993, through a BC Assets and Land Corporations (Crown Lands at the time) standard, competitive proposal call which followed a two year long public information process.

- 2) Summary Page iii: Horejsi indicates that only 49% of the Jumbo Creek watershed is ecologically suitable for use by grizzly bears.

ENKON rated the Jumbo Creek Valley for suitable grizzly bear habitat based on the 1:20,000 scale biophysical mapping prepared by Norecol, 1992. The results of the habitat rating showed that approximately 15-20% of the Jumbo Creek drainage was rated as moderate-high value for feeding and shelter (Figure 7). The majority of the valued habitat was associated with the valley bottom adjacent to Jumbo Creek and primarily along north facing avalanche paths/slopes downstream of Leo Creek and east of Jumbo Pass.

- 3) Figures 1 and 15 exaggerate the scale of the "Base Area" and Glacier Dome Lodge footprints and the area impacted from ski lift/run development and imply the development of four additional day lodge facilities.

For example, Figure 1 implies that the project facilities will impact the majority of the Jumbo Creek valley. In fact, the base area/lodge and clearing for the ski runs/lifts impact a relatively small component (<1% of the 151 km²) of the entire valley.

Figure 15 provides an outline of the land required for development of Glacier Dome Lodge and the “Base Area”, plus the development of four other day lodges on Glacier Dome, Jumbo Mountain, The Cleaver and Farnham Glacier. There have never been any plans for the development of the four day lodges that Horejsi depicts on Figure 15.

Based on Horejsi’s Figure 15, the land required for development of Glacier Dome Lodge would be approximately 1 km² or 100 hectares. As previously mentioned the land required for development of the lodge is <2 hectares, substantially less than the 100 hectares implied by Horejsi.

Based on Horejsi’s Figure 15, the land required for development of the “Base Area” would be approximately 9 km² or 900 hectares. As previously mentioned, the land required for development of the base area including the single family dwellings is approximately 100 hectares (200-250 acres), substantially less than the 900 hectares implied by Horejsi.

In conclusion, the report by Horejsi (2000) grossly misrepresents the scale and type of facilities proposed for the Jumbo Glacier Resort Development, resulting in a lack of credibility to the analysis and conclusions of the entire report.

Should you have any questions or require clarification please give me a call.

Sincerely yours,

ENKON Environmental Limited



Glenn Stewart
Principal