Valhalla Wilderness Society

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Valhalla Wilderness Society Submission to Government on the Formal Proposal for an All Seasons Resort at Zincton

Due to severe impacts and risks to people and wildlife that the proposed Zincton resort will impose or increase, as detailed in the following submission, the Valhalla Wilderness Society urges the government decision-makers to completely and immediately reject all parts of the proposed development. This submission also includes three attachments:

"Review and Assessment of Proposed Zincton Farms Limited Application for License of Occupation," Brian L. Horejsi, Ph.D.

"Western Toads, Their Migration and Mortalities in Relation to Three Forks, Zincton and London Ridge," by VWS biologist Amber Peters and Wayne McCrory, RPBio.

"New Denver Preliminary Flood Hazard Assessment Report", WSA Engineering Ltd. 2017, done for the Village of New Denver.

I. SUMMARY: Getting Serious about Climate Change

In June, 2021 the BC government went to the trouble of amending the All Seasons Resort (ASR) policy to commit to "considering" climate change impacts as its number one – and only – "Operating Principle":

"Sustainable land use that commits to environmental stewardship and the consideration of climate change impacts."

What is the government doing to consider climate change? And what is there to consider?

The decision-makers should consider how, in this very year, there was a summer heat wave that killed many British Columbians; accompanied by fires that consumed a whole BC village. And now, as we write this, numerous highways in southwestern BC are closed by landslides; highway transportation is stalled; 20,000 people displaced from their homes; at least four people dead; tens of thousands of farm animals dead; houses washed away, land flooded with toxic waste.

The BC government's 2019 Preliminary Strategic Climate Risk Assessment report rated severe riverine flooding, extreme precipitation and landslides as "low" risks in present day, which are projected to increase to "medium" risks by 2050. The report outlines a potential scenario in which a significant landslide cuts off transportation routes in BC. The severe rainfall, flooding and landslide disaster of November 14 in the Fraser Valley have now done just that. This should be a reminder that evidence-based climate predictions continue to be realized decades sooner than expected.

It is time for BC to take a precautionary approach and brace for the impacts of climate change, not add unnecessary infrastructure that could worsen the impacts of climate change, or worsen the province's ability to deal with them.

1. How Zincton resort would contribute to climate change

The proponent, Mr. David Harley of Zincton Farms, Inc., is to be commended for aspiring to make his proposed resort "carbon neutral". However, some convincing analyses show that would turn out to be far from true. One overriding factor is that the use of "green energy" on one small patch of ground cannot make up for the greenhouse gases spewed year after year provincially, nationally and internationally, not only in travel to and from the resort, but also in the fossil fuels used to build the resort's houses, apartments and other infrastructure.

All seasons resorts are an industry that generates high consumption of fossil fuels. Yes, we should have some resorts. But as early as 2006 BC's All Seasons Resort Guidelines (still on the MRB's website) said that "Today BC's 700 resorts and lodges employ over 26,000 people and contribute around \$178 million to government (provincial and municipal) coffers each year." How many resorts are enough? Shouldn't there be firm environmental limits? Where is the environmental stewardship when you put one in prime grizzly bear habitat?

2. How Zincton could worsen the impacts of climate change.

Increasing hydrological impacts - The attached 2017 report by an engineering firm, WSA, done for the Village of New Denver, documents already existing flood hazards to New Denver from Carpenter Creek. It warns of potentially serious damage to the Carpenter Creek bridge in New Denver, and points out that would be a catastrophe for residents, as it would cut those on the north side of the bridge off from emergency services, and cut those on the south side off from groceries, gas, the bank, pharmacy and other services. The report warns that climate change will worsen the hazards and the damage. This echoes a warning being heard around the world from scientists: while the predominant change may be more heat and drought, there will also be extreme storms with greatly increased rainfall and peak runoff, as we have just seen in BC

The proposed Zincton resort will exaggerate this further. This submission cites research showing that ski resorts significantly increase water runoff from slopes, causing higher peak flows carrying more sediment. Zincton Farms' own consultant, Cascade, says that some areas of soil on London Ridge are unstable, and there are also areas of shallow soils over bedrock. Such soils, on steep slopes, or even on benches over steep slopes, are known to be prone to landslides.

Compounding stresses on wildlife — BC's best possibilities for ski resorts in a warming climate are from midto high-elevation, encompassing alpine and subalpine areas. These sites are often the very definition of grizzly bear habitat in BC, suggesting province-wide cumulative impacts on grizzly bears as large resorts spread and grow. Researchers are increasingly considering grizzly bears as being at risk from climate change. For one thing, climate change is a suspected contributor to the decline of salmon all over BC, which has led to grizzly bears on the coast starving to death. The grizzly bears of Goat Range Provincial Park have suffered a known blow to their seasonal Kokanee salmon food supply. The cause is as yet uncertain, but Kokanee in Kootenay Lake have crashed and the once-thriving commercial and non-commercial grizzly bear viewing during the spawning run up the Lardeau River has also all but disappeared. This makes Zincton Resort displacing the bears from their highest (known-to-us) concentration of huckleberries all the more grave. In some recent years drought has diminished the huckleberry crop as well.

3. How Climate Change Could Worsen the Impacts of Zincton: the threat of wastewater pollution of Carpenter Creek and Slocan Lake

Do we really want to perch the sewage of 1,800 people per day on steep slopes above Carpenter Creek, Slocan Lake and New Denver? Along with the pesticides, fertilizers and motor oil they use? With increased risk of severe storms with torrential rain facing us? Severe storms with heavy rainfall that increase peak flows have been associ-

ated with peaks of downsteam pollution and human health impacts. Climate change also increases the water temperature, increasing the capacity of microorganisms and environmentally harmful algae to grow. While advances in technology are available to reduce the risk of pollution, the best technology is extremely expensive and this can impede the use of it. This question should receive the highest standard of environmental impact assessment (EIA), yet that is precisely what we have been denied. New Denver residents do not take drinking water from Carpenter Creek, but swimming and fishing in Slocan Lake is a large factor in the quality of life of the residents, and in the tourism appeal of New Denver. Anything that pollutes the lake will first put people's health at risk and then cause closure of swimming, which would be a huge loss to residents and tourists alike. Zincton would substantially increase the population in the watershed, yet it will lie outside New Denver boundaries and beyond its control.

4. How would climate change affect the viability of the proposed resort?

The 2019 report of the International Panel on Climate Change cites the following observations already happening: general decline in low-elevation snow cover; decline in snow cover duration; snow avalanches involving wet snow have increased; rain-on-snow floods have decreased at lower elevations but increased at higher elevations. Winter runoff has increased due to more precipitation falling as rain. These are expected to magnify.

VWS director Craig Pettitt was the founder and longtime ski guide of Valhalla Mountain Touring. In this submission he reviews the skiing portions of the Zincton proposal. The proponent more or less dismisses the effects of climate change on the viability of his proposed business, but Craig states that is far from a realistic view. He seriously questions the economic viability of a major ski resort in the area. Why haven't the government or the proponent provided the public with a complete inventory of all the existing commercial skiing permits in the area surrounding New Denver and Kaslo? Are existing small operators being harmed to accommodate a large-scale, high-impact ski resort that won't do well in our local conditions?

5. How ski resorts worsen the province's ability to deal with climate change.

BC had its wakeup call in 2003. It had had years of extensive forest fires before, but never with so many communities threatened. Interface fires burned down 334 homes and many businesses, and more than 45,000 people had to be evacuated. Lives were lost, and the cost to the province was \$700 million. One cause of this new and urgently dangerous situation was the expanding human settlement/wildland interface, which means more chances for human-started fires, and more houses and communities threatened by fire. Yet expanding the interface is what new ski resorts are doing. The All-Season Resort policies include attached residential development. This summer a whole town burned down. There were not enough fire fighters to address every fire. BC's *Provincial Coordination Plan for Wildland Urban Interface Fires* (2016) acknowledges the need to prioritize places for firefighting. Given that the Zincton project includes a self-contained village with three times the population of New Denver, one day fire fighters may have to choose between protecting New Denver or protecting Zincton resort — or they may protect neither adequately.

6. How did we get here?

Climate change arrived through a societal and governmental willful blindness in which environmental protection is routinely pitted against jobs and the economy, as if destroying the ability of the planet to support life is a legit-imate cost of doing business. With BC under a state of emergency, can the government, can our society, get to the point of seeing that potential environmental impacts can no longer be pushed away in the name of jobs and the economy?

¹ BC Centre for Disease Control, "Summary Working Group Report on the Environmental Transmission of Norovirus into Oysters, 2018.

² De Jong, C., "Challenges in Mountain Hydrology in the Third Millenium, Frontiers in Environmental Science, 2015.

As it happens, BC resorts have a terrible reputation for providing jobs. Socioeconomic studies on BC resort towns, and many news reports, show that ski resorts near small towns begin a process in which an influx of wealthy tourists buying vacation homes generates inflation and makes houses and apartments unaffordable to most people. Jobs at ski resorts are notoriously low-paying. Together with skyrocketing costs, many workers and longtime residents cannot meet the cost of living in ski towns. Many home owners have to leave because of being unable to pay the taxes; renters leave, unable to afford a place to rent. Many Canadian workers simply go somewhere else looking for jobs, leaving the ski resorts with huge labour shortages. Thus BC resorts depend heavily on *foreign migrant workers* for as much as 35-60% of their labour force (and that's before the pandemic). As we write, numerous news outlets are publishing articles about serious labour shortages at BC resorts.

The Zincton developer's plan to build apartments for workers on his property does little to assuage these concerns, as it seems that in other resort towns low wages and high costs have been enough to make the living there untenable. And there would be other problems, such as increasing the construction and population at Three Forks, and creating a self-contained community there. Nor does solving the worker housing problem do anything to ease the growth of vacation homes and all the problems that it will bring to New Denver, Silverton and Kaslo.

7. The cumulative effects of logging, climate change, and other forms of development, such as the proposed Zincton Village and Crown land tenure, have already dealt a serious blow to many species of BC wildlife.

Logging and climate change have worked together to deal a heavy blow to wildlife in many areas of the province. Once plentiful moose in BC's Interior Plateau region have been drastically reduced by huge clearcuts as a result of rampant beetle infestation of the forest, which in turn is said by scientists to be related to climate change. The elk hunting season has had to be reduced or closed in some areas. Commercial fishing of BC's famed salmon is now closed indefinitely. These effects have ripped the title of "SuperNatural" off of BC, and ripped the false face of "sustainability" off government policies.

The attached report on Western Toads by biologist Amber Peters and VWS director Wayne McCrory, RPBio, reveals a number of significant contradictions and mistakes in the proponent's consulting report by Cascade. Among these is Cascade's repeatedly pinpointing the Western Toad concern at Fish Lake alone. This was never a valid assumption, but over the last year biologists conducting VWS's Western Toad research have found Western Toads, both alive and dead on the highway, at Three Forks and at many points below London Ridge all the way to Fish Lake. The attached submission on grizzly bears by Dr. Brian Horejsi also cites flaws, errors and unfounded conclusions in Cascade's report. Unfortunately, Cascade's report is all many members of the public have to review the scientific basis for the proponent's claims — and whatever decision the government makes.

Still, what is reflected in Cascade's report is harrowing enough in some cases: two blue-listed species of fish (bull trout and cutthroat trout) in creeks that drain both sides of London Ridge, and resort development that will require massive disturbance of soils on steep slopes above the creeks, which ultimately go through New Denver and Kaslo, and empty into Slocan or Kootenay Lakes. Fish that currently persist despite heavy metals in the water will incur heavier impacts from dirty water, to which bull trout are extremely sensitive. But in addition, the proponent's own consulting report acknowledges that ground disturbance in the proposed tenure area could possibly release further heavy metals into the creeks (to be carried by the creek to Sloocan and Kootenay Lakes).

8. Taking the review of the private land development out of the MRB process is a further evasion of environmental impact assessment at a time of intensifying environmental tragedy.

The Crown land tenure for skiing and other recreational development is to enable, support and enrich the proposed real estate development on the private land portion. The government's removal of the private land portion, which has the most serious environmental and socioeconomic impacts, suggests that the subdivision on the private land is virtually *fait accompli*. The ASR policies state that, in considering whether a project qualifies as an all-seasons resort:

"If the resort development uses Crown upland and/or aquatic land in association with private land, then the entire area of the All-Seasons Resort is used in determining if the project meets the above criteria and thresholds."

Surely, then, the environmental impacts of the whole project area should be considered. Yet we are told that review of the plans for the new municipality will be carried out by the Ministry of Transportation and Infrastructure — a Ministry that has no mandate for conservation or preserving natural values. It will be concerned only with how to build a good subdivision.

In short this is all the same profit-first evasion of environmental protection that has given us British Columbians dead from heat, mourning of their burned-down homes, killed by landslides, and facing unfathomable loss from climate-change floods. This review refuses to consider the parts of the Zincton separately, as they cannot, with any honesty, be considered separately.

II. ENVIRONMENTAL IMPACTS

BC's "All Seasons Resort Policy Guidelines" state that the Guidelines "adhere to the requirements defined within a variety of Provincial statutes and policies"; and that "When properly applied they should:

"Ensure that resort and tourism use of the land is the highest and best use of the subject area."³

The facts presented in this report make it overwhelmingly clear that the highest and best use of the Highway 31A corridor is as habitat for wildlife, including the four vulnerable species identified by McCrory Wildlife Services as being at risk in the project area (grizzly bears, western toads, wolverines, and mountain goats), but also the moose and elk that frequent the valley and have lost so much habitat elsewhere. Secondly, retaining what little stability the New Denver and Kaslo watersheds still have is crucial to the health and safety of the two municipalities.

A. Wildlife and Biodiversity

1. Breaking down BC's last opportunities for parks connectivity

BC hasn't protected enough parklands to preserve biodiversity into the future. This was made clear in a 2010 Auditor General's report on the conservation of ecological integrity in B.C. parks and protected areas. The increasing isolation of protected areas, now almost entirely surrounded by clearcuts, permanent developments, and wild-life/ecosystem-disrupting recreation tenures, is why scientists have referred to BC's parks system as "islands of extinction". The province hasn't planned for the explosion of development and extraction outside of parks that has left our parks cut off from the protection that adjacent, intact ecosystems would provide.

Cascade's admission that listed species "may" use the proposed CRA, bordering Goat Range Provincial Park, as a connectivity corridor is a gross underrepresentation of the significant use of the CRA by multiple at risk species across all seasons.

Mr. Harley's consultants do seem to recognize that the Zincton CRA is located within the Grizzly bear corridor identified in the Kootenay-Boundary Higher Level Plan Order. In recognizing this, Mr. Harley has carved out a major area around the proposed alpine lodge as a summer exclusion zone, with a long runway across London Ridge that would stay open for people to access the lodge.

In reality, such an exclusion zone would be ineffective; for instance, transporting people onto the ridge via gondola would disturb Grizzly bears, leading to their displacement or habituation. This would be dangerous for both people and bears, and almost certainly result in extermination of "problem bears" and increased lower elevation

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³ Section 1.6.2, Pg. 8.

highway mortalities.

Benn and Herrero (2002) found that 119 of 131 Grizzly bear deaths in Banff and Yoho Parks from 1971-84 and 1985-98 were human-caused. 71% of Human-caused mortalities were from control of problem bears, i.e. bears that conflicted with human activities, and 19% were from road and rail mortalities. Increasingly, female bears became more problematic than males, leading to greater female bear deaths which take a significant toll on populations. Unnecessary mortality of at-risk Grizzly bears in an at-risk population, due to the development of another resort town is completely unacceptable in this time of mass extinction.

Nielsen et al. (2004) and Herrero (2005) studied Grizzly bear mortalities in and around Banff National Park, and found that Lake Louise stood out as having the highest mortality events. VWS director and bear biologist Wayne McCrory pointed out in his 2020 submission to the Mountain Resorts Branch that, "considering that Parks Canada has one of the most stringent wildlife attractant management programs in Western Canada with strong attractant laws and a warden service to monitor and enforce (far superior to what the province has) the results of this study are revealing, if not shocking, as to what will happen with the Zincton townsite."

A 2017 Auditor General's report, on the management of Grizzly bears in B.C., again points to B.C.'s lack of habitat connectivity as a serious threat facing Grizzly bears. Bella Coola was one example given of an area where high human-bear conflict persists, resulting in high Grizzly bear mortalities, because the town was developed in prime feeding habitats. It is irresponsible and counter to a great body of evidence to assume this same scenario would not occur in the high-value feeding habitats of the proposed Zincton CRA.

The 2010 AG report made clear that "parks and protected areas are not adequately connected" and "the effectiveness of protection depends on the proximity to other protected areas, *quality of the environment around the protected area*, and the impact of internal and external stressors on the protected area." This is just one statement that sums up an overwhelming body of research revealing that activities outside of parks impact what BC has worked so hard to protect for future generations. Since the 2010 report, BC has not done enough to address the issue of parks connectivity, or that areas that have been protected are being lost and degraded due to clearcutting up to their edges, being engulfed by fires, and being over trampled by too many visitors in small areas with conservation funds steadily shrinking.

Habitat connectivity determines the likelihood of long-term survival of many species, especially large mammals, and species like Western toads that rely on several different habitats throughout their life cycle. Opportunities to



maintain this connectivity have and are breaking down at an alarming rate in British Columbia, leading the Auditor General to conclude that "conservation of biodiversity will become more at risk in the future due to the inadequate connectivity of parks and protected areas." Since that statement the UN reported that 1 million species are at risk of extinction, and things aren't getting better as we continue on business as usual.

To place a town site, alpine lodge and major ski development in the corridor between major provincial parks would be a nail in the coffin for the region's biodiversity and would seriously undermine the decades-long efforts to preserve the regions ecosystems in provincial parks and Higher Level Land Use Planning.

B.C. Office of the Auditor General. 2010. Report on the Conservation of Ecological Integrity in B.C. Parks and Protected Areas

https://www.bcauditor.com/sites/default/files/publications/2010/report_3/report/OAGBC_Parks%20Report_OUT2.pdf (Accessed Nov 20, 2021)

B.C. Office of the Auditor General. 2017. Independent Audit of Grizzly Bear Management. https://www.bcauditor.com/sites/default/files/publications/reports/FINAL_Grizzly_Bear_Management.pdf (Accessed Nov 22, 2021)

Benn, Bryon, and Stephen Herrero. 2002. Grizzly Bear Mortality and Human Access in Banff and Yoho National Parks, 1971-98. Ursus (International Association for Bear Research and Management), vol. 13, 2002, pp. 213-221.

Herrero, S. (editor). 2005. Biology, demography, ecology, and management of Grizzly bears in and around Banff National Park and Kananaskis Country: the final report of the Eastern Slopes Grizzly Bear Project. Faculty of Environmental Design, University of Calgary, Alberta. Canada. http://www.canadianrockies.net/wpcontent/uploads/2009/03/Complete_ESGBP_FinalRe

McCrory, M. 2020. June 22, 2020 Submission to Mountain Resorts Branch. https://www.vws.org/wp-content/uploads/2020/06/ZinctonMcCroryWildlifeImpactSubmissionJune24forVWSWeb.pdf

Nielsen, S.E. et al., 2004. Modeling the spatial distribution of human-caused Grizzly bear mortalities in the Central Rockies Ecosystem of Canada. Biological Conservation 120:101-113.

2. Three grizzly bear experts prominent in their field cite serious impacts to grizzly bears in Goat Range Provincial Park and the surrounding region.

Three expert grizzly bear scientists have now reviewed the Zincton application and come to similar conclusions that the Central Selkirk grizzly population and the connectivity corridor between Goat Range Park – Kokanee Glacier Park that straddles the core Zincton ski proposal development would be negatively affected if the Zincton resort was approved in the end. Dr. Michael Proctor in his 2020 submission to MRB concluded that the resort development would compromise a regionally important inter-population grizzly corridor, negatively affecting the small population to the south; compromise one of the best all-season grizzly habitat areas including important huckleberry areas; create a real potential for human safety injuries/fatal incidents with mountain bikers and grizzly bears; overwhelm the Whitewater grizzly bear viewing area and inhibit the province from meeting preexisting conservation goals (Proctor 2020).

Bear biologist and RPBio Wayne McCrory did an independent environmental impact review and concluded that the proposed resort would cause major adverse and long-term environmental impacts on four focal species: grizzly bear, wolverine, mountain goat and western toad and that any mitigation measures would not be effective (McCrory 2020). Both submissions were ignored by MRB, which approved Zincton's Expression of Interest.

Subsequently, VWS hired grizzly bear expert Dr. Brian Horejsi to do an independent third-party review for the next round of public reviews. Dr. Horejsi came to similar conclusions as the other two bear experts as follows:

"Approval of the Zincton application will jeopardize the formally 'protected' ecological integrity of Goat Range Park (and quite likely, at least incrementally, that of Kokanee Provincial, Purcell Wilderness Conservancy and Valhalla Provincial Parks) by impacting grizzly bears that move in and out of the Park" (Horejsi 2021).

Both McCrory (2021) and Horejsi (2021) for their November 23 submissions to MRB included their separate conclusion that the September 2021 Cascade Environmental Review for Zincton (Cascade 2021) was seriously flawed and erroneous in the conclusion that:

"Any identified potentially adverse impacts appear to be mitigable and any identified potential residual effects are not expected to be significant, nor are they expected to contribute significantly to cumulative effects."

First the Cascade biologists did not provide any evidence or data in support of this conclusion, including a scientific review of how successful and effective the various mitigation measures they proposed really are. Secondly, since the consultants stated their report was not an environmental impact assessment, they would have had to make a quantum leap over key information to the contrary to arrive at such an unsupported conclusion. To VWS this represents a significant bias and mis-use of science to favour their client's ski development proposal.

Citations:

Cascade Environmental Resource Group Ltd. 2021. Environmental Overview: Zincton. New Denver, BC. Prepared for David Harley, Zincton Farms Ltd., Vernon, BC. Project No.: 1021-01-02 Date: September 3, 2021

Horejsi, B. 2021. Review and assessment of proposed Zincton Farms Limited Application for Licence of Occupation. Disposition Transaction 942473. Mountain Resorts Branch, Ministry Forests, lands and Natural Resource Operations. 19 November, 2021.

McCrory, W.P. 2020. Professional review of impacts on wildlife, including cumulative effects considerations of proposed Zincton Resort EOI using four focal/umbrella species: Grizzly bear, Wolverine, Mountain goat, and Western toad. 27 pp. Submitted to MRB, June 22, 2020.

Proctor, M. 2020. Comments on proposed Zincton Resort. Letter to Kelly Northcott, MRB. May 2020.

B. Hydrology and Water Quality

1. Existing hydrological hazards and risks to New Denver from Carpenter Creek watershed

The attached 2017 report from WSA Engineering, done for the Village of New Denver, says that New Denver is vulnerable to the following hydrological hazards from Carpenter Creek: high spring runoff, debris flows, debris floods, landslide dams and riverbank erosion. The hazards exist because 100 years of mining, clearcutting and fires, and mining and logging roads on steep slopes have caused high peak flows during storms or snowmelt, carrying sediment from erosion and rolling rocks so big that their rumble can be heard in nearby houses with the windows closed. This process has damaged the creek bed, causing channel instability.

These hazards and risks are not theoretical; the Carpenter Creek bridge on Highway 6, in the midst of New Denver, has had to be replaced or repaired a number of times in the past. Only about three years after the WSA report, one heavy storm in 2020 required extensive repairs along Highway 31A and on the side road through Sandon. Repairs were also needed on the Carpenter Creek bridge in New Denver. The road to the area's prime tourist spot, Idaho Peak, has had to be reconstructed, which is still not complete after two years; and the storm left the New Denver stretch of Carpenter Creek clogged with huge heaps of logs and debris. The mine mill at Sandon had to do extensive and expensive repairs.

The severity of storms has been increasing for some years. In 2009 the road between New Denver and Kaslo was closed for several days due to a heavy snowstorm that brought down avalanches on the highway at locations where no one could remember ever seeing them. According to the Highways ministry:

"there were 33 slides along Highway 31A between New Denver and Kaslo, with 24 of them reaching the road. Most of them were between New Denver and Fish Lake." (Valley Voice, Jan.14, 2009)

Many of these came off of London Ridge where Zincton Farms, Inc., has applied for Crown land tenure for extensive ski development and a 50-bed lodge.

The WSA report warns that the hazards will worsen with climate change, and that the dikes protecting the village, especially on the south side of the creek, may be insufficient to protect residents. WSA states that "Significant damage to the Bridge would be catastrophic for the residents and economy of New Denver and area."

1. How climate change will increase the hydrological hazards

The changes experienced in New Denver, and slated to increase due to climate change, are consistent with the predictions of the 2019 report of the International Panel on Climate Change, which states:

"River runoff in snow dominated and glacier-fed river basins will change further in amount and seasonality in response to projected snow cover and glacier decline (very high confidence) with negative impacts on agriculture, hydropower and water quality in some regions (medium confidence). The average winter snowmelt runoff is projected to increase (high confidence), and spring peaks to occur earlier (very high confidence) ... Hydropower operations will increasingly be impacted by altered amount and seasonality of water supply from snow and glacier melt (high confidence). The release of heavy metals, particularly mercury, and other legacy contaminants currently stored in glaciers and permafrost, is projected to reduce water quality for freshwater biota, household use and irrigation (medium confidence). {2.3.1}

3. How ski resorts compound the hydrological and water quality impacts of climate change

Researchers in Vermont compared a watershed with a ski resort in its upper bowl, with one that had natural forest in its bowl. They found 18-36% higher water yields, ten times more chloride in the water (perhaps salt from parking lots), and two-and-a-half times more suspended sediment in the watershed with a ski resort (Wemple, et al, 2007). The researchers say that these increases were greater than those caused by logging. The causes cited include extensive forest cutting for ski lifts, ski runs, and residential areas; soil disturbance; soil compaction by sking, and impervious surfaces, such as roofs, parking lots and roads.

Of great concern to Zincton's tenure application is the impact of skiing itself on the hydrology of London Ridge. There is more information available from research on European ski resorts. In the Alps, studies show that the ability of soil on ski runs to absorb water is significantly reduced:

"Infiltration [of soil by water] is strongly modified in ski resorts, on ski runs, parking lots, roads and dirt roads frequently used by heavy machines and lorries. Results show that infiltration on ski runs located between 1800 and 2200 m in the French and Italian Alps can be 5-20 times lower than on natural soils... (de Jong et al., 2014). Despite re-greening, intensively compacted ski runs have been observed to remain 100% impermeable."

Increased peak flows can not only create huge damage to watersheds, stream beds, highways, bridges and towns, but also decrease water quality by carrying, not only the sediment eroded from slopes and creek banks, but also the sewage, salt, pesticides and motor oil from residential development. One of the most serious potential impacts of a subdivision upstream from New Denver and Slocan Lake would be pollution of the creek and the lake by sewage.

As recently as 2016 BC accounted for 40% of sewage overflows in Canada. According to BC's Centre for Disease Control, overflows may occur "during wet weather events when the volume of rainfall overwhelms a com-

⁴ Intergovernmental Panel on Climate Change, Executive Summary, Ch 2, Pg 2.3.1, 2019 https://www.ipcc.ch/srocc/

⁵ Univ of Vermont, "Ski Area Affects Mountain Watershed, Study Shows", 2007, www.sciencedaily.com/releases/2007/05/070517160300.htm.

⁶ de Jong, C., "Challenges in Mountain Hydrology in the Third Millenium, *Frontiers in Environmental Science*, 2015.

⁷ Cruickshank, A., "Untreated sewage pollutes water aross the country," *StarMetro* Vancouver, April 11, 2018.

bined sewer's capacity and sewage is released into the environment." A 2018 report by the BC Centre for Disease Control stated that an estimated 80% of septic systems in BC are in performance malfunction, which may lead to seepage. The report states that problems may go undetected for many years, but an extreme rainfall event, causing larger than normal runoff, might have contributed to an outbreak of gastrointestinal illness.

One might think that in a resort where the second-home builders are wealthy and the developer promises to use all the latest "green" technology, that sewage contamination wouldn't be an issue; but we do not know that. According to one research paper on mountain hydrology:

"Mountainous terrain increases the costs of water pumping and treatment, therefore not all house-holds or tourist amenities are joined to wastewater networks. In addition, water treatment plants are often under dimensioned for cost-benefit reasons and thus cannot cope with the quantities of waste water produced by ten thousands of tourists in the winter season."

In a section below, Director Craig Pettitt points out that the Zincton Village would be located 300 vertical metres above Kane Creek, requiring water to be pumped up a steep slope. What does this mean for sewage treatment and risk of sewage spillage? Researchers have noted that sometimes housing lots don't allow enough room for adequate management of sewage. Zincton's Formal Proposal states that the footprint of the Village will be:

"limited to 30 ha -20% the size of New Denver and 10% the size of Kaslo ... the cliffs and steep slopes surrounding the site prevent expansion beyond this size." ¹⁰

Yet it's to have almost three times the population of New Denver? The lack of an Environmental Impact Assessment on this, and worse — the separation of the village from the tenure application review — shows incredible disregard of New Denver, its values and the health and safety of the people who live here.

4. Zincton: hydrology and water quality impacts from the use of public land

The proposed Crown land tenure would affect both tributaries that enter Carpenter Creek at Three Forks. Highuse downhill skiing and associated development would increase soil compaction and, in combination with tree cutting for ski runs, increase peak runoff and erosion of soil from London Ridge into Seaton Creek between Bear Lake and the creek's confluence with Carpenter Creek.

Director Craig Pettitt examined maps and details in the Formal Proposal, and in Cascade's report, and determined that road access and parking necessary for the proposed village will involve both Crown and private land and will entail massive excavation. In addition, there will be additional road and trail construction on Crown land needed to access and build the proposed chairlifts and associated service roads.

Zincton's Formal Proposal identifies 19.3 ha of vegetation removal for these roads and trails. The proponent argues that this is only a small percentage of the project area, which is totally irrelevant. It only takes one pinpoint location, such as misdirected water drainage, or a saturated patch of ground, to start a landslide; and the erosion from the 19.3 ha will be cumulative with erosion over the whole project area.

Some of these roads and trails will permanently be maintained for lift servicing, emergency services, and skier egress from the bottoms of the lift serviced ski runs. All of these access and egress trails will be built on steep slopes above both Kane and Seaton creeks, they will involve several stream crossings and could cross unstable slopes. Substantial side cuts will have to be made on the steeper slopes to form a bench for snow cat travel and

¹⁰ BHA, Zincton Formal Proposal, S4.4.1, pg. 4-25.

⁸ BC Centre for Disease Control, "Summary Working Group Report on the Environmental Transmission of Norovirus into Oysters, 2018.

⁹ de Jong, C., "Challenges in Mountain Hydrology in the Third Millenium, Frontiers in Environmental Science, 2015.

summer maintenance vehicle access. The adverse effects of these construction activities were significant enough for Cascade to state:

"Construction of lift lines, associated access and egress as well as lodge construction works may further disturb elements associated with tailings from adits and mines within the proposed CRA potentially contributing to exceedances of the BC's working water quality guidelines for freshwater aquatic life through subbasin runoff." (CECG Environmental Overview, Pg 128)¹¹

Cascade has shown both Kane and Seaton Creeks to already be compromised by heavy metal content elevated above guidelines for aquatic life, and warns that:

"Any changes to water quality or disturbance within the riparian areas adjacent to the drainages on site could affect the fisheries potential of downstream fish bearing watercourses and downstream human water usage, whether it be for agriculture, domestic, or commercial." (CECG Environmental Overview, Pg 128)¹²

We note, as well, the proposed placement of a septic tank in conjunction with the 50-bed backcountry lodge, in an area of shallow soil over bedrock above Watson Creek. And while it is commendable of the developer to offer only light clearing of trees for ski runs, what this means is that in 10-20 years the roots of some of the trees on these unstable slopes will rot, diminishing the ability of the soil to hold water. We cannot control what climate change will do, but we can avoid unnecessary disasters, such as a landslide in the area of a high-elevation, commercial septic tank.

4. Toxic mine tailings in Seaton Creek

VWS director Wayne McCrory comes from a mining family; as a boy he visited the mines in the Highway 31A corridor with his father, some of them already quite old and abandoned. He warns that, while beavers appear to have restored the wetland area in Seaton Creek between Zincton and Three Forks, and moose have frequented the ponds as well, the beaver ponds are underlain by extensive mine tailings from the Zincton mine mill. Destabilization of the watershed from a combination of climate change and the negative hydrological influences that we anticipate will result from the Zincton development could unleash severe washouts in Seaton Creek, releasing massive amounts of these old mine tailings into Carpenter Creek. Toxic water may also be flowing out of the huge tunnel network, including the "glory holes" — places where the ore was so rich that miners dug caves the size of rooms in a house.

The Whitewater mine is also very big and deep. It did not throw tailings in the creek, but there was a huge black tailings pond on the flats on the south side of Retallack. It, too, has probably been restored by beavers to look deceptively like a wetland. We can scarcely imagine what kind of effort the federal government would have to make to clean this mine contamination up, but it would be immensely expensive and take a very long time.

WSA noted mine tailings ponds along the upper stretch of Carpenter Creek that could be breached by a high water event. These are upstream of Three Forks and not affected by the proposed development, except that, in the event of a breach, whatever contributes to the amount of water flowing into New Denver would determine how far the contamination would be spread. Disastrous contamination of land by mining contamination in floods caused by peak flows and landslides generated by clearcuts is well known in the U.S.

5. Massive impacts of Zincton Village road construction on private and Crown land

We have heard much rhetoric about the no-car, gondola-accessed "green" mountain village. Although the developer may maintain a pedestrian village, it appears that his clientele will be walking on ploughed streets. In order

¹¹ CECG Environmental Overview 20210923, Water/Sediment Quality, Pg128, S5.3

¹² Ibid.

to establish Zincton Mountain Village (ZMV), Mr. Harley will have to submit a subdivision plan for approval. Normally subdivisions require two two-laned access roads that connect to the highway. Two roads are required for safety in case of emergency, such as a wildfire or some other event closes off one of the roads. These roads have to be built on appropriate grades to safely handle two-wheel drive vehicles, emergency vehicles and snow-plough vehicles. In addition all buildings within ZMV would have to front on streets that can safely handle emergency vehicles and be wide enough to be clear of snow ploughing debris.

Currently Mr. Harley uses 2.6 km of substandard industrial road above Seaton Creek and Highway 31A to access his proposed townsite; 1.28 km of it is on crown land, the K&S recreation trail. The excessive grades and narrow widths of this existing road make very little or any of it useable for a subdivision access road. The ZMV townsite is perched on a bench at an elevation of 1000m (3300') and is vertically 660m (2200') above Highway 31A in Seaton creek. Any access road built above Seaton Creek and Highway 31A will have to cross very steep and potentially unstable slopes. These slopes have an average gradient of 50% with sections up to and greater than 100%. This means that in order to build a two-lane road, huge side cuts will be required that will generate enormous volumes of waste material that will have to be trucked to stable slope disposal areas. These sidecuts have the potential to destabilize the steep mountain slopes above Hwy 31A and increase the public's exposure to land-slide risks. The cut banks and fill slopes will also generate a high volume of sediment that will make its way into Seaton Creek and not far beyond into Carpenter Creek.

To our knowledge Mr. Harley hasn't identified a second access road, but he has stated that he intends to have a publicly accessed gondola site and 140-car parking on his property (base camp) approximately 1 km from the highway in Kane Creek. Since this is being proposed for public access and the first 800 m of this access road is on Crown land, the government may require a two-laned access road. This route is the only area that makes sense for an emergency egress from the village and fulfills the requirement to have two connections to an existing road network. At present it is impossible to say what the government will require, but with the hazard of interface fires growing each year, one would think that safety standards would be required.

The access to Kane Creek is dominated by steep (80% average) slopes that are very wet. Sections of the old industrial road have slumped into the creek and other sections are perched on the creek bank. Regardless of whether the Ministry of Transportation and Infrastructure (MOTI) requires a two-lane road, it will have to be a wide road to accommodate the proposed electric buses and vehicles carrying as many as 500 people a day to ride the free gondola to the village (i.e, likely at least 200 vehicles per day).

MOTI will require setbacks from riparian zones which generally require both a horizontal and elevational component to move the road away from sensitive sites along the creek. These requirements mean that very little if any of the old road grade can be used for basecamp access. Carving a two-lane road out of these steep slopes will generate massive cuts in the slopes and waste material that will have to be deposited in stable areas that aren't prone to landslides or flooding. All these exposed soils would generate sediments that will flow down slope into Kane Creek. This will be very expensive road to build safely. If this road is going to serve as a second access to the village, a very expensive bridge crossing of Kane Creek would also be required. Who will pay for these expensive roads where they cross Crown land? Once they are built, they become public access roads and the burden of maintenance and snow ploughing will be borne by the BC taxpayer.

7. Kane Creek Water Supply

Zincton Mountain Village as proposed will be situated on a dry ridge at an elevation of 1000 m (3300'). There are no adequate water sources above the townsite; according to the Formal Proposal by Brent Harley & Associates (BHA), the developer plans to supply drinking water to the Village from Kane Creek, which lies at an elevation of 700 m (2300 ft.) in the valley bottom. At a minimum this means that water would have to be pumped from Kane

 $[\]frac{13}{\text{https://www2.gov.bc.ca/assets/gov/driving-and-transportation/transportation-infrastructure/engineering-standards-and-guidelines/highway-design-and-survey/tac/tac-2019-supplement/bctac2019-chapter-1400.pdf -accessed Nov 1/21 CP$

Creek vertically 300 m. A holding tank above the village would surely be required, which might add another 100 ft. Trucking the water up the hill is scarcely conceivable. In all likelihood supplying water to the Village would require very high pressure pumps and high pressure water pipe. Having this infrastructure on steep slopes poses a high landslide and erosion risk that would result in major damage to Kane Creek should any failure of this water supply infrastructure occur.

Something else the public should know is what kind of purification system will be sufficient to bring the water to drinking water standards. Cascade Environmental Consulting Group Ltd.(CECG) paid considerable attention to the presence of heavy metals in the stream basins and water courses surrounding the proposal. CECG derived their information from geochemical surveys conducted by the BC Ministry of Energy, Mines and Petroleum Resources in 2020, which is the most current and complete data set collected by its Geological Survey since its inception in 1976. (CECG Environmental Overview 2021)¹⁴.

The executive summary of CECG's report states that sediment within the proposed Zincton CRA, and within the surrounding 3 km study area, showed heavy metal contamination — Lead (Pb), Zinc (Zn), Cadmium (Cd), Nickel (Ni) Arsenic (As), Chromium (Cr) and Manganese (Mn) — in excess of BC's working water quality guidelines for fresh water aquatic life. Nevertheless, there are fish in most or all of the creeks, including blue-listed bull trout and cutthroat trout within the proposed Controlled Recreation Area, and likely Western toad breeding sites in the wetlands along Seaton Creek downslope from Three Forks and Zincton. What is of most concern to the proposed Zincton Village is that, if the heavy metal content exceeds what is appropriate for fish, it is certainly not fit for human consumption.

Cascade reports that the Ministry of Mines' Geologic Survey found high concentration of elements which exceed the water quality guidelines upstream of all known past producing mines on Kane Creek upstream of the confluence with O.K. Creek. (CECG Environmental Overview 2021)¹⁵ The Mines Ministry tested the sediments in these creeks to inform miners of where prospective ore bodies might lie. From this we infer that the ore-rich geology of the area naturally leaks some of its metals into the water, and that safe water suitable for human consumption in the village can't be found by simply moving the water intake upstream beyond the old mines. Cascade also found no exceedances of drinking water guidelines downstream from confluence of the three creeks that form the lower reach of Carpenter Creek, indicating that the toxic metals settle to the bottom given enough distance from the sources. To conclude, CECG stated that:

"Water quality of the streams draining the study area is of particular concern for fish and fish habitat, downstream water users and water license holders. (CECG Environmental Overview 2021)¹⁶

We understand that it takes complicated and expensive methods such as reverse osmosis to remove heavy metals from drinking water. It is critical that a safe and affordable method of water purification be found and evaluated before any further steps in this subdivision process are allowed to proceed, and the public should know how the water will be purified and transported up to the village. However issues such as this, added to the major concerns we have outlined, make us believe this project is neither safe nor economically sustainable, while it portends huge damage to the public interest – the very thing the government is in office to protect.

¹⁴ BC Ministry of Energy, Mines and Petroleum Resources, BC Geological Survey, 2020. Update of the Provincial Regional Geochemical Survey (RGS) database at the British Columbia Geological Survey [WWW Document]. URL https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey/geology/regional-geochemical survey; CECG Environmental Overview 20210923, Water/Sediment Quality, Pg119S4.3.2

¹⁵ CECG Environmental Overview 20210923, Pg iv Executive Summary – Aquatic Environment

¹⁶ CECG Environmental Overview 20210923, Water/Sediment Quality, Pg119, S4.3.2

III. RECREATION AND TOURISM, WEALTH AND POVERTY

1. The Ski-Town Scandal of Wealth-Induced Poverty

The developer, Zincton Farms, has relentlessly portrayed the communities near his proposal as backward, impoverished communities that need his resort to bring tourism wealth and jobs. The Formal Proposal contains a graph showing that New Denver has a higher percentage of residents at or below the poverty line than many other towns, for instance Revelstoke. We can hardly be surprised that a resort town like Revelstoke has a lower percentage of residents at or below the poverty line, when there are a number of studies showing that Revelstoke and virtually every other ski town have incurred an influx of wealthy vacation-home buyers who snap up houses needed for people who want to live there, while longtime home owners are forced to sell their homes, unable to pay the taxes, and many people are made impoverished by low wages and high costs and have to leave town.

One study looked at Fernie, Golden, Kimberley, Rossland, and Revelstoke ("Resort-induced Changes in Small Mountain Communities in British Columbia", Nepal and Jamal, BioOne, 2011). They documented the following pattern:

"All five resort communities have experienced dramatic increases in residential unit and real estate prices ... The growth in resort-induced real estate properties and associated amenities is creating specific challenges. These include a rapid increase in property values affecting housing affordability, changes in land use and the environment, social tensions arising from competing interests in natural and cultural resources ... This has made it difficult for many long-time residents to maintain their property, whereas for newcomers, property is simply unaffordable."

Did Revelstoke Ski Resort raise the income level of its low-income residents? Take a look:

"Food bank usage has increased dramatically in the past few years. Many food bank clients are employed and most live in private rental housing ... Whereas the cost of purchasing ownership housing has stabilized — albeit over 30% higher than prior to the development of Revelstoke Mountain Resort — property taxes continued to increase incrementally. Rental housing prices are the highest in the region, and are up 52% to 150% higher than in 2006 ... the end result is increased inequality between those who can afford to live in the community and those who cannot — but want to."

"Revelstoke Community Poverty Reduction Strategy" (2012)

A UBC report, "A Living Wage for Revelstoke, BC: Economic Impact Assessment Report," (Carlaw et al, 2016) summarized the findings of the Poverty Reduction Strategy:

"32.4% of Revelstoke households were considered low-income (Zacharias and Brown 2012, iii). Factors of impoverishment included increased food bank usage; 30% increase in housing prices after the development of the Revelstoke Mountain Resort; continued increase in property taxes; high rental housing prices; and social housing waitlists Zacharias and Brown 201, ii)."

"While Revelstoke remains one of British Columbia's top places to live, the rising cost of living combined with increasing housing prices and property taxes have reduced the economic security of residents... As a result, a growing number of community members are experiencing social exclusion as they struggle to meet their own basic needs, negatively affecting community cohesion and stagnating the local economy (Zacharias and Brown 2012). In addition to threatening community stability and identity, Revelstoke's increasing unaffordability has made it more difficult to retain residents long-term and attract new ones (Zacharias 2006)...."

There are reports from both Golden and Revelstoke ski towns of tourism businesses losing major income because of labour shortages.¹⁷ This effect pertains to ski resorts across BC. Workers leave because wages are low and they can't make a living in a high-priced ski town. A letter to the editor of Whistler's *Pique* magazine blamed landlord greed: "The workers are forced to live in houses with 10 or more, and have two or more jobs, just to be able to afford to pay insane amounts of money for often low-quality, crowded housing." (Pique, March 7, 2021)

Yet it's obvious that the ski resorts themselves exploit young people by offering them lift tickets, and when there aren't enough to hire, they turn to temporary foreign workers. Whistler, Fernie, Big White and other ski resorts hire a major percentage of their staff from foreign workers on two-year work-vacation permits. (*Nelson Star*, Nov. 11, 2021). According to the Vice President of Big White, 60% of its staff before the pandemic were international workers. (*Travel Industry TODAY*, Oct. 24, 2021)

2. Recreation and tourism are already well established in New Denver

The public record shows that a specific kind of tourism and outdoor recreation has been carefully cultivated in New Denver, Kaslo, and the area in between for decades, by residents and the provincial and federal governments. This includes the creation of three wilderness parks, numerous trails, trail signs, nature interpretive signs, public events in the field by biologists, and creation of a grizzly bear viewing trail.

Trailforks website, as of two years ago, showed that, in a triangle between Bannock Point and Rosebery in the Slocan Valley, and Sandon, there were already 46 mountain bike trails covering 143 kilometres. The majority are along Carpenter Creek. How much of these are new trails, and how much old railroad grade, we do not know. There would be much more if we counted all the way to Kaslo.

Other dimensions include, in New Denver, a municipal campground, a golf course and restaurant and the Valhalla School of Music; and lake-based recreation in New Denver, Silverton and Kaslo, including swimming in Slocan Lake and a renowned fishery in Kootenay Lake which, according to provincial biologists, suffers from an overabundance of threatened bull trout. And along Highway 31A there is mining history at Sandon and the Retallack lodge. *These communities do not need a major ski resort to have adequate tourism.*

Residents have long recognized that our area has world-class natural surroundings that would attract both new residents, and tourists from around the world. At public meetings they have favoured "small-scale" and "low-impact" development and activities that would maintain the high quality of our natural amenities for both residents and visitors. Keeping development minimal to appeal to nature-based and wilderness-based tourism is widely recognized as a profitable niche in the tourism market. It is recommended by economists as sustainable, because it does not progressively degrade its resource base. It also allows the residents to set the tone and spirit of their community rather than the people who visit here. This approach has been highly successful in drawing tourists, which have increased gradually and reached overwhelming proportions in the summer of 2020, the first year of the pandemic.

In 2021 revenues from the New Denver campground were 35% higher than budgeted and almost \$27,000 higher than in 2020. Building permit revenue so far is over \$18,000, and \$13,000 over budget. Many people come to live in New Denver because they like the parks and the freedom of self-guided nature-based recreation with family or a few friends. The campground is packed with vehicles carrying kayaks, canoes and mountain bikes.

Tourism assets in the area are developing overuse and overcrowding issues, such as packed vehicles in the crumbling Idaho Peak parking lot, heavy use of Valhalla Park, and conflicts between recreationists at Retallack. Carrying capacity and cumulative effects studies of commercial and non-commercial recreation are urgently needed,

¹⁷ "2019 Tourism Economic Benefits and the Economic Impacts of Labour Market Challenges in Golden", Align Consulting Group for the city of Golden.

¹⁸ New Denver Council, Valley Voice, Nov. 4, 2021.

even without adding another all seasons resort that would effectively throw a population bomb into the current situation.

3. Existing Commercial Snowcat Skiing

Although the 2006 All Seasons Resort Guidelines state there are 700 resorts and lodges in BC, today the Mountain Resorts Branch website does not provide a complete inventory of BC resorts. It only shows 31 ski resorts and ski hills, of which 16 are said to be major. However, this out-of-date tally omits a number of skiing businesses in the area around New Denver and Kaslo. Nowhere does the Mountain Resort Branch information include Retallack Resort, which is literally across the highway from the area proposed by Zincton.

A quick check reveals eight snowcat operations, most of which are connected to lodges, in the West Kootenays. In a broader area between Revelstoke, Golden and the Slocan Valley we count 13 such operations. We omit here the ubiquitous Canadian Mountain Holidays heli-skiing and lodge operations, as well as other heli-ski businesses. There are also three major ski hills – Red Mountain, Revelstoke and Whitewater — within two hours of Zincton. All these ski operations are forbidden by their contracts from criticizing new proposals, even overlapping operating areas, that would cut into their business profits. Snowcat operations include:

In the region

Monashee Powder snow cats – south of Revelstoke in the Monashee mtns Mustang Powder sno cat – 40 minutes east of Revelstoke /sicamous- Monsashee mtns K3 cat skiing-Revelstoke Sicomous –north of Trans Canada Anstey Mtn Chatter Creek Cat Skiing - Golden Fernie Wilderness Adventures Snowcats – Fernie

More local West Kootenay Snowcat Skiing.

Great Northern Snowcat- north trout lake
White Grizzly snowcat - Mid Lardeau
Selkirk Wilderness snow cat - Meadow Creek
Retallack Adventures - Retallack
Valhalla Powder Cats - Little Slocan
Snowater Powder Cats - Bonnington-Kootenay river
Baldface Lodge - Grohman Creek Nelson
Red Mn Cat Ski - Rossland tied into the ski hill.

4. Skiing in the Zincton area

Director Craig Pettitt founded Valhalla Mountain Touring and ran it as a ski guide for 16 years between 1977 and 1993. The following is his assessment of the proposed Zincton resort regarding skiing:

Since selling Valhalla Mountain Touring, I have found good powder skiing, often off of resource roads off the Highway 31A corridor. Over the years, I have witnessed some of the changes that the UN Panel on Climate Change has described; they have been going on for a long time. There are many non-commercial skiers today near the highway in the corridor, but they are enjoying touring regardless of the conditions of the snow. For those of us who seek out deep powder — and for the international skiers that Zincton Farms hopes to attract — reliable days of powder skiing shut down very early in spring.

Much of the skiing terrain identified on Zincton's maps is on south- or southwest-facing slopes. These will have good powder much less of the year. When the sun comes out they will be crusted. The developer proposes to take over an area of Whitewater Ridge leased to Stellar heli-skiing company, saying that Stellar doesn't use it very much. There is a good reason for that. Being on southerly aspects, it will be crusted much of the ski season.

The proposed Zincton real estate development is being promoted as a high-elevation mountain village. 19 It is situated at 1000 m elevation; we've compared it to some towns and villages close to other ski areas in BC and Alberta. The site of the proposed Zincton village is lower than these incorporated municipalities in BC: Rossland 1036 m; Kimberley 1127 m; Invermere 1187 m and in Alberta: Banff 1407 m; Canmore 1436 m; Calgary 1143 m; Jasper 1332 m; and Lake Louise 1562 m.

There are 12 major ski resorts In the Okanagan-Kootenay-Rockies region of southern BC and Alberta. Out of these twelve resorts (Google Search 2021) there is only one resort that has a ski base area lower in elevation than the proposed Zincton Village and that is Revelstoke Mountain Resort. Quite often in the past various of these resorts have had trouble opening for Christmas, a major profit period for them. Those at higher elevations and in colder climates have turned to making artificial snow to capture the Christmas holiday season. The making of artificial snow is now ubiquitous in the ski industry due to the warming climate; but with lower elevation, a milder climate, and a shortage of water, I seriously doubt this option will be open to Zincton. If it is, that would mean huge increase in energy and water usage, and increased pollution in the watershed.

Coupled with the low elevation of Zincton's ski lift base areas is the fact that they are also on southerly aspects.²⁰ This makes the developer's claim that he can offer four months of skiing highly doubtful. In reality the ski lift pick up points may have very compromised to no snow after as short as a 2 month season. Another unreliable statistic that Zincton uses to promote its skiable days is mean temperatures, when in reality it is the daily maximum temperature that controls the condition of the snowpack. Each day that the surface snow temperature rises above 0°C it crusts the powder and ruins the powder skiing that Zincton is promoting. The number of below 0°C days per season is on a decline, with scientists predicting a best case scenario of many BC ski resorts being unable to operate by the end of the century. This is if governments take immediate action to stop global warming, the success of which will take decades to achieve significant change.

Another reality of the Kootenay ski season is that clientele interest wanes drastically by the end of March and the majority of ski areas close down at the end of the Easter weekend. In fact Canadian Mountain Holidays closes its heli-skiing base in Nakusp at the end of February because it is unable to deliver its clientele to consistently good powder snow, and they are not constrained to ground-based infrastructure. There may be a handful of persons that will ski into the backcountry on their own, but not enough to warrant running a lift for.

Revelstoke, a city known for its spectacular mountain scenery and deep winter snow pack, has Revelstoke Mountain Resort (RMR). Persons within the ski industry and privy to the operations of RMR say that very few resorts in North America can make money off of ski lift ticket sales in winter. This is also the case for RMR despite Revelstoke being located on the Trans-Canada highway and only 2-1/4 hour drive from Kelowna International airport, 5 hours from Calgary and 6 hours from Vancouver. Only recently has RMR been able to make money, and that's thanks to using the gondola to access the pipe coaster in summer, which was \$1 million dollars to install and needs very little support (no snowmaking, grooming, etc). Turning our closest winter recreation area into an amusement park would be a severe blow to the natural- and wilderness-based environment so valued by people who use the Highway 31A corridor.

5. The increased resilience of existing small-scale, low-impact recreation

Valhalla Wilderness Society does not wish our wildlands to be overloaded with small commercial permits, because areas need to be left for wildlife and for non-commercial recreationists. However, the smaller commercial operations survive (for some I would say "thrive") in this area even with the climate changes. These operators have small areas that have north-facing slopes. They are serving only one or two dozen clients per trip, and there are cases where wealthy customers pay to have trips with only a few friends. With small groups, the small operations can "farm the snow" on the slopes they ski and keep finding powder. Contrast this with putting 1,200 people on the slopes; the snow gets thoroughly packed. The small operators offer a real backcountry experience, which is

¹⁹ BHA Formal Proposal, 2021

²⁰ BHA Formal Proposal, 2021

impossible when putting 1,200 people, or even 100 people, on the slopes in one day via gondola, with a village of shops and restaurants.

The Zincton developer himself recognized in his Expression of Interest that major ski resorts are no longer believed to be sustainable, and that skiers are departing those places en masse for the backcountry. The problem is that he is promoting his plan as a backcountry operation when in reality it is another downhill skiing resort with a real estate development attached. Even BC's All Season Resort Guidelines (Chapter 1) state that vacationers: "are looking for a special connection with their chosen destination. Many are seeking a more fulfilling, more intimate experience than in the past: most have no desire to experience the urban style that they left behind in the cities where they live. These values reflect a common craving to re-connect with one's natural environment in a safe pleasurable and fulfilling way." And yet it pushes resort developers to add "commercial overnight accommodation" to their projects, fostering large-scale, high-impact tourism that can only harm existing operations.

4. The highway 31A corridor: Commercial versus noncommercial recreation

Commercial recreation diminishes opportunities for non-commercial recreation. Non-commercial recreation is often equated with local residents, but a great many travellers seek nature on their own or with family or friends. Past studies of economic benefits from BC Parks have shown very substantial revenue to government and tourism expenditures connected with travelling, but many travellers also enjoy non-commercial recreation outside of parks, and this is one factor that attracts people to want to live in New Denver and Kaslo.

Maximizing numbers of clients and continual expansion is a characteristic of many commercial operations, although there are some wise operators in our area who have been committed to "keeping it small" for many years, so as not to ruin the wilderness experience. Overcrowding degrades visitor experience so that, even if non-commercial users are allowed access, they no longer want to go to such areas. The province's misguided monetization of outdoor recreation is putting non-commercial recreationist in the same position as wildlife: being told "go somewhere else, this place is for paying customers". Increasingly there are few other places to go. Commercial applicants target the highest value, most popular recreation areas and the government freely approves them.

There needs to be a <u>balance</u> between commercial and noncommercial recreation in the Highway 31A corridor. That balance has already been lost with the noise of heli-skiing and the monopolization of Jackson Basin in summer with yo-yo mountain biking. But with the approval of Zincton resort, many local people and residents would, realistically, lose the whole area forever. For instance, once the developer parks over 1,000 people a day next to the Whitewater trail, what can we expect? No more wilderness, no more grizzly bears and no more people seeking a true backcountry experience.

5. Privatization of public land.

Claims that the leasing of commercial tenures does not constitute the privatization of public land are false. For many years now the privatization model used in Canada has been for government to keep ownership and some control of public assets (for instance, BC parks) while farming out operations and management to private entrepreneurs. This amounts to very substantial control by private investors. Privatization in modern times means government downloading the responsibility for managing public land onto wealthy investors. The government could lease public land without abdicating independent oversight in the public interest, but instead it gives the land over to the profit motives of private individuals and looks the other way.

In the case of Zincton, the developer owns the land that would hold the new village, but the All-Seasons Resort Policy has provisions for a developer to buy public land for development. Thus the land on which the backcountry lodge is built could eventually become private land, or the government could sell land for additional development. Promises the developer makes about allowances for public access can be whatever is needed to get people to support his project, but can disappear in the future.

For instance, almost all of the 5,500-hectare tenure for which Zincton has applied would be a "Controlled Recreation Area" (CRA). Under the BC resorts policy, the developer is granted the power of: "Controlling, regulating, directing or denying public access, including motorized vehicles, and all activities in the Controlled Recreation Area for the purpose of ensuring the safety of all visitors, resort staff and workers." This applies even when the proponent has promised free public access; it appears that, using public safety as an excuse, the developer could revoke that promise. Granted that sometimes there could be legitimate public safety concerns, public land should have government as an independent, unbiased arbiter, not a developer with a conflict of interest to gain exclusive use for their clients to increase their marketing appeal.

There is also well-documented court precedent in BC of ski resort owners gaining expanded legal control, even over the objections of government, despite the protection of a rigorous *Park Act*, because of the investments they have made in infrastructure. The prestigious logging company accounting firm, PriceWaterhouseCoopers, explained this clearly in a report for BC Parks ("An Examination of Revenue Generating Streams for BC's Protected Areas System", Step 14, 1998), citing the examples of ski hills in Cypress Bowl, Manning and Mt. Seymour Provincial Parks that were leased out to private entrepreneurs.

For instance, claiming that his existing ski facilities inside the park were incurring damage due to overuse, the Cypress Bowl owner sued the government and won the right to put a 100-seat four-season mountaintop restaurant and more in the park, charge the public for the use of trails, and cut down 800 year old trees to make new ski runs. But the All-Seasons Resort Policy doesn't contemplate any lawsuits: it signals an eagerness to sell the tenure to the operator in a "phased" process. Therefore claims by the Zincton developer that the government will always have control of the land, and non-commercial users will have free access are not to be trusted even if they are, at the moment, sincere.

In view of all the impacts, dangers, and inequalities cited in this submission, Valhalla Wilderness Society, on behalf of its members, donors and supporters, urges complete and immediate rejection of the Zincton proposal.

Sincerely,

Craig Pettitt Director

 $^{^{21}}$ "All-Seasons Resort Policies and Procedures", S12 Pg 24 $\,$