

Holland Lake Lodge Facility Improvement & Expansion Concerns and Questions

1. The Holland Lake wilderness is home to **endangered/protected species** such as bull trout, grizzly bears, wolverines, turtles, and loons. Any type of forest demolition should not occur for the protection and preservation of these and other species - including aquatic life and plants. **The forests in Montana are WILD.** They are **NOT a TAME playground**, and contain fragile life (plant, water, and animal) which rely on each other and minimal human interaction to thrive. I have spent over 35 years in the Swan Valley. Several times, I have been to Holland Lake, and several times, while wanting to hike to the waterfall, the trail has been closed due to grizzly bear sightings or other bear sightings. Holland Lake is a **RESPECTED NATURAL Playground** for man and beast. I doubt a large ski corporation would be willing to close human activities due to bear activity. When you are in these woods, you need to pay attention. I grew up knowing what to do if you came across a mountain lion, the importance of knowing how quickly to move and sing on some trails if it was in a bear area, and understanding that **WILDLIFE thrives** (plants, water, beast, etc.) **better when man leaves it alone.**

To have a company come in and propose a Play Area for people that have no idea about how to interact with the type of WILDLIFE that inhabits the area is --- well, idiotic. Life in these woods is precious and needs to be treated as such. To ignore it is to destroy it. Let's face it, trying to make it a "tame" play area for man would undo all the progress that has been made since the '70s. It would destroy countless ecosystems, encourage animal attacks (which people should be blamed for, but unfortunately, it will be the animal who is blamed), it will stress the aquatic and land life - which are already stressed by global warming (fish are dying in the rivers in the summers due to the temperatures rising, and plants are not thriving like they once did) - the list of destruction goes on. Again, this is a WILD area, and animals, plant life, and aquatic life are already struggling - i.e. to find food, hibernate on time, and thrive amongst man. Increasing the foot traffic year-round via skiing, heli-skiing, removal of trees/forest, increasing waste and garbage, etc., will only diminish and stress the vulnerable WILDLIFE even more. This is not a place for a person that doesn't understand their impact upon other fragile life forms, or upon the community into which they enter. This is a NATURAL PLAYGROUND, a place of respect and support for each other.

2. During the meeting on 10/4/2022, **POWDR never answered what they would be doing in the wintertime** – they only spoke about Spring, Summer, and Fall. This leads to one conclusion – they do plan on implementing skiing of some sort. The following discusses pollution caused by skiing and noise pollution/ecotourism and their effects on humans and nature. **Direct quotes are taken from various studies.** You can further review these studies in the attachments to this document.

Let's talk about **noise pollution and nature**. I would like to refer to a study completed in 2017; *Ecological Consequences of Ecotourism for Wildlife Populations and Communities*, by Graeme Shannon, Courtney L. Larson, Sarah E. Reed, Kevin R. Crooks, and Lisa M. Angeloni.

“There is increasing evidence that human visitation to natural areas can **have significant effects on the environment and the wildlife** therein, especially when we consider the scale of visitation. A recent study estimated that globally, terrestrial protected areas receive **eight billion visits** per annum...”

“**Given that rare and endangered species are often confined to protected areas and exist in comparatively small, isolated populations, the threat of disease to their long-term existence is very real.** Ecotourists may also inadvertently introduce a deadly pathogen indirectly on boots or clothing. In such cases, bacteria or viruses released into an environment where there is no natural resistance can quickly spread through naïve populations.”

“**There is substantial evidence** to indicate that **ecotourism** is not a benign activity with negligible disturbance but can, in fact, have **major implications for the reproductive success, survival, and long-term viability of a number of populations of species, particularly those that are rare, geographically isolated, and/or sensitive to disturbance.** These impacts are driven by the indirect effects of human presence on the abundance, distribution, reproductive success, and survival of species that are disturbance sensitive. Visitors can also have direct effects, which include causing mortality, providing artificial food resources to encourage sightings of elusive species, contributing to habitat degradation and fragmentation, introducing non-native species, and being vectors for disease. Ultimately, this can have **far-reaching impacts across the ecosystem,** generating cascades that ripple throughout the food web.”

Let’s talk about skiing and pollution. Skiing involves wax being applied to skis or snowboards. The wax contains **PFAS and PFCs.**

“**PFCs are toxic to animals, including humans,** causing damage to the immune, liver, and endocrine systems. That’s important because your endocrine system regulates almost everything from metabolism, to growth, to tissue function and even sleep. PFCs do bioaccumulate, though, meaning it builds up in living creatures and is slow to be excreted. Plus, they are almost immortal. They’re incredibly hard to break down. You find them in your Gore-Tex jacket and Teflon pans. They will last forever, so they are **best kept away from the water cycle that humans and animals end up ingesting. Leaving wax deposits in the snow enables it to reach water systems and soil through meltwater.**” <https://onetreecatime.fr/how-damaging-is-ski-wax-to-the-environment/>

* “**PFAS** are used to keep food from sticking to packaging or cookware, make clothes and carpets resistant to stains, and create firefighting foam. These chemicals do not degrade easily in the environment. **Multiple health effects** associated with PFAS exposure have been identified and are supported by different scientific studies.” <https://www.niehs.nih.gov/health/topics/agents/pfc/index.cfm>

I would like to defer to a study, *Waxing Activity as A Potential Source of Exposure to Per- and Polyfluoroalkyl Substances (PFAS) and Other Environmental Contaminants Among the US Ski and Snowboard Community* by Crawford, Doherty, Gilbert-Diamond, Romano, and Henn 2022.

“Participants tended to be long-term winter sports enthusiasts (e.g., median downhill skiing duration: 31 years). Nearly all (92%) participants personally applied some wax to their skis/snowboards, and **most applied waxes containing PFAS (67%)** and solvents (62%). Ski professionals waxed the most pairs of skis with **fluorinated** waxes annually (median (IQR): 20 (1, 100)), though individuals participating recreationally also applied fluorinated waxes regularly. Exposure interventions were not widely used.

(Fluorinated waxes are waxes that are infused with perfluorinated chemicals. These waxes are **damaging to the environment** where they are produced, **dangerous to human health** when applied to skis, and **bad for the local ecosystems** when skied at a favorite ski center or mountain).

Waxing activities may pose a significant risk of exposure to PFAS and other environmental contaminants among the US ski and snowboard community.

In a cross-sectional survey of members of the US ski and snowboard community, we observed **high potential for exposure to PFAS** and solvents as a result of long-term involvement with snow sports (i.e., proxy measure of exposure duration), high prevalence of wax and solvent use (i.e., a relative measure of exposure intensity due to direct contact with these products), and repeatedly waxing skis and snowboards over the course of a year (i.e., proxy measure of exposure frequency). Our research provides evidence that wax-related exposures are common among people engaged with cross-country and downhill skiing and snowboarding at many levels of sport, including roles such as recreational participants, amateur athletes, industry professionals, and friends and family members of skiers and snowboarders who are not themselves participants.

Based on our survey data, wax use was most common among cross-country skiers regardless of wax category, followed by downhill skiers and snowboarders. This was especially true for fluorinated waxes and solvents.

In conclusion, snow sport participants often apply waxes to the base of skis and snowboards to improve performance. Available information about wax chemistry shows these **wax products contain numerous complex chemicals with known adverse human health effects**. Our research highlights that non-fluorinated and fluorinated wax use is common among members of the US ski and snowboard community at many levels of sport, including recreational participants, amateur athletes, industry professionals, and friends and family members of skiers and snowboarders who are not themselves participants. Furthermore, the duration, intensity, and/or frequency of wax-related exposure is high for many individuals. Participants tend to engage with skiing and

snowboarding in a variety of roles for many years and may apply wax in multiple roles. Relatively few individuals utilize PPE to reduce exposure and only a moderate number employ institutional controls. **Collectively, this implies long-term exposure to wax-related environmental health hazards.”**

I would like to defer to another study written in 2020 by Carlson and Tupper; *Ski Wax Use Contributes to Environmental Contamination by Per- And Polyfluoroalkyl Substances*. It was **completed at a year-round outdoor recreation area that included cross-country ski trails, trails for hiking, biking, and snowshoeing, and a non-motorized boat launch**. The **contamination of Soil, Snow, and Water was studied**. Unlike Europe, which has started to control ski waxes sold and used, **the US is behind**.

Per- and polyfluoroalkyl substances (PFAS) in ski wax abrade onto snow during use. Melted snow had the most PFAS, but **soil and groundwater were also contaminated**. Both long- and short-chain PFAS were detected. Ski waxes currently in use contain hazardous PFAS despite regulatory actions”

Per- and polyfluoroalkyl substances (PFAS) are used in a wide variety of consumer products, including ski waxes, and are widespread persistent and **hazardous environmental contaminants**. Ski waxes are composed of hydrocarbons and fluorocarbons, and come in a variety of types ([Plassmann and Berger, 2010](#)). PFAS in products like ski waxes confer high-performance functions but also have hazardous properties. Long-chain PFAS like PFOA and PFOS, in use for decades, are highly persistent, bioaccumulative, and toxic chemicals (PBTs), and due to their widespread manufacture, use and disposal, are ubiquitous **global pollutants**. PFAS are capable of long-range transboundary **movement via air and water currents and deposition in precipitation** ([UNEP, 2020](#)). PFAS are detected in rainwater in the U.S. in areas near and far from known sources ([NC DEQ, 2018](#); [Ross, 2019](#)).”

Continued use of fluorinated ski waxes is a **significant source of environmental contamination**...We found PFAS contamination in all snow samples, some soil samples, and a well-water sample.”

3. If one were to research POWDR i.e., via Facebook, or Glassdoor, one would find nothing but negative reviews from people who have sold property to the company. Complaints include broken promises about maintaining the integrity of the land, low-paying jobs, essential community members being pushed out due to high pricing, and overall - the essence of corporate greed. POWDR, Christian, and the Forest Service have been incredibly sneaky about moving forward with the proposal.

The corporation says it will bring in jobs. Again, if one were to research this corporation, a list of complaints from underpaid employees would be found. These would not be quality jobs. In fact, it would only add to the number of people that would be pushed out of the area

- people who are true Montanans and have homes and jobs, i.e., the local grocer, school teacher, and dental hygienist. You've seen this happen in Bozeman, where not even a dental hygienist can afford to live in the area to provide services, leaving the community in a bind for adequate health care. Knowing how impacted other places have been, i.e., unavailable health care professionals and unavailable educators due to unaffordable living as a result of big corporations and money - **How could moving forward with such a proposal and company that would lead to pushing local community members out of their homes not be considered harmful and negligent to the citizens of MT and its future generations?**

4. There is a lot of history at Holland Lake, including the buildings and the tribes that used to be there. The facilities should absolutely qualify for historical preservation and should not be torn down.
5. The land belongs to the people. In fact, people want to preserve and leave it as is so they can continue to enjoy and remain in harmony with nature. These are not the true intentions of a giant corporation, and it appears the Forest Service – which is devastating. The public is and will continue taking better care of the land, water, and animals as they stand, because they understand what a resource Holland Lake is and how precious it is. Allowing such a corporation to move in and to carry out **ANY type** of proposal would surely bring nothing but threats to all forms of life. It would not improve the quality of life for the people that live there, for the water life, or for the animals.

The public does not believe this proposal should move forward at all due to protecting various protected/endangered species, maintaining the sanctity, tranquility, and history of the land, and maintaining the livelihood and culture of the public.

QUESTIONS:

- I. Based on the knowledge of how increased human activity and noise pollution harms endangered/protected animals and their environments (noise pollution and contamination from skiing), and having the knowledge that these fragile ecosystems are already stressed by global warming – **please, tell us how increasing tourism via a year-round resort which would increase air, water, soil, and noise pollution wouldn't be of great harm to the people and to the animals, plants, and aquatic species that already live there.**
- II. If the land belongs to the people, and the majority of people (the public) oppose the threat of a destructive corporation and proposal, and there are **endangered and threatened animals/aquatic life** - **on what grounds could such project be allowed?**
- III. Based on the knowledge of how skiing pollutes water, soil, and snow, on what grounds can you say an all-season resort would be beneficial to the health and wellbeing of man and beast?

- IV. On what grounds can you say any increased human activity and demolition of the fragile environment at Holland Lake would not be of great to harm to ourselves, to everything in nature, and for future generations to come?
- V. If logging can be shut down, i.e., Plum Creek, to save endangered/threatened animals such as the Grizzly bear, AND to preserve water quality - **then why isn't such a ridiculous proposal like this one being shut down?**
- VI. **Given the countless ways the public, various professionals, and I have pointed out the enormous downsides to the entirety of this company and proposal**, how can you support allowing a giant cooperation that is known for not supporting fragile ecosystems, their employees, or communities, and are only known for lining their own pockets? How would it be of any benefit to the local community, the WILDLIFE, fragile plant life, or aquatic life?
- VII. Since when did the permit move up to 15 acres? Explain this increase.
- VIII. Does POWDR plan on expanding past these 15 acres in the future? This includes when they have to renew permits and leases.
- IX. Identify the other business partners that are behind this deal – **including political partners.**
- X. Can POWDR put it in writing that they **will NEVER** implement any skiing, snowboarding, cross country skiing, heli-skiing, hunting, motorized water activities, or any other recreational activities besides hiking, camping (tent only) and swimming – now or in the next 500 years?
- XI. Can POWDR put it in writing that they **will NEVER** buy more land than is already in use – or for the next 500 years?
- XII. Can POWDR state what their plans are for wintertime activities?
- XIII. Can POWDR promise that they will **NEVER privatize** the beach where they plan to put cabins or cut it off from the public?
- XIV. Can POWDR promise that they won't **EVER** try to extend their reach to other areas of the Swan Valley?
- XV. Can POWDR state what wage they will pay the handful of employees? Does this include benefits?

- XVI. POWDR stated that there would be lodging for everyone. Yet, lodging for a 4-person family is estimated to be \$2,000 for a weekend. It seems like lodging for the average person would be a campsite, proceeded by RV sites (more pollution), and so on and so forth. **Can POWDR provide a breakdown of prices that would be for camping, RVS, various lodging? Can they promise that the price would NEVER change (go up over the years)?**
- XVII. **Knowing there are several endangered and protected animals, aquatic life, and plants, how can this proposal even be considered?** Especially when the demolition of the forest, increased foot traffic, and water traffic will surely diminish and ruin several fragile ecosystems and habitats.
- XVIII. The amount of disrespect already shown to the public regarding this proposal should speak volumes and provide a strong foreshadowing of what will come if this company is allowed to move in and if the proposal moves forward.
- XIX. **Why is the public being lied to by the Forest Service?** Why are separate meetings being scheduled by POWDR that don't include community members? Why are they treating locals like a child who wouldn't know any better? **Provide complete transparency. It is ridiculous to see the Forest Service state that the public doesn't know what a CE does and does not include. It is even more ridiculous that an environmental study was not completed.**
- XX. **Why does a decision have to be made by March 2023?**

Respectfully,

Stephanie S. Kavon