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Mel Bolling
Forest Supervisor
Caribou-Targhee National Forest
c/o Jay Pence
Teton basin Ranger District Ranger
P. O. Box 777
Driggs, Idaho 83422

Re: Grand Targhee Master Development Plan Projects

Dear Mr. Bolling,

Here are my comments on the Caribou-Targhee National Forest's scoping document on Grand Targhee Resort's projects. Before doing so, I would like to thank the preparers for a well-written document that was easy to follow, and a well-organized website that provides much of the detailed information.

The purpose and need is too narrow in scope. The two acts cited in the scoping document (National Forest Ski area Permit Act of 1986 and Ski Area Recreational Opportunity Act of 2011) allow for ski areas to enhance their offerings, etc., but they do not necessarily justify a need or mandate. The 2018 Grand Targhee Master Development Plan serves as a "wish-list", but it not a decision document. The MDP points this out, as does your letter to Mr. Gillette on February 5, 2019, and the scoping document should as well.

Beyond giving a general impression of improving and diversifying the offerings at GTR, the MDP and the scoping document should clearly state the justification for the projects. For example, why add several hundred acres of skiing terrain, restaurants, a zip-line, and other facilities at all, or at the proposed levels? Is there market research, either specific to Grand Targhee, or otherwise applicable, that motivates spending large amounts of money and impacting the natural environment? The need should be justified beyond growing to stay competitive and meeting ever-increasing expectations of the skiing public. Someday, the resort will run-out of space to grow. Will it then become non-competitive and fail?

Assuming that the need is eventually justified someday, there will be impacts to the natural environment if the projects are implemented. These impacts range from trivial, within-resort improvements, such as yurts and lift-realignment to road construction, new lifts, large buildings, and glading.

The mountain slopes that comprise Grand Targhee are unusual in that they were, and are still, natural ski slopes. Not much forest clearing (i.e, glading, cut-runs) and terrain smoothing were required to provide skiing there. This is largely due to the geology and elevation of the slopes. Much of the terrain is Madison limestone, which weathers slowly and generally has thin soils. Deep snow encourages forb abundance, which in-turn encourages pocket gopher abundance. Gophers, through herbivory and soil turbation, can limit tree establishment, especially in already harsh environments.

Pre-settlement conditions on Fred's and Peaked Mountains are well-documented in William H. Jackson's photographs taken from and near Peak 9930 (Marys' Nipple). Recent-re-takes of these scenes show little change in the natural environment since 1872. This is the case for subalpine and alpine environments in western Wyoming, as documented in over 80 re-takes of early scenes. Three scenes of the Grand Targhee Resort area, taken in 1872 and 2020, are included at the end of this letter.

The tick-tock of the alpine clock is slow, and recovery from disturbance such as road building and tree-cutting will be slow too. The MDP includes some (1.7 miles) road rehabilitation. Time to recovery should be monitored and assessed before building new roads, especially those into new areas. Tree cutting should be judicious, as mature trees could be hundreds of years old and replacement will be slow.

The additional ski terrain on the South Bowl and Mono Trees areas will change the character of Grand Targhee, as more cut-slopes will be obvious, as well as roads and ski lifts. The South Bowl is quite visible from the South Fork of Teton Canyon, and the Targhee National Forest's visual quality maintenance objectives should be retained.

The Fred's Mountain summit restaurant will require a lot of excavation of the summit ridge area, and the general location is already congested. Grand Targhee's master plan with Teton County Wyoming has a lot of new commercial space planned, but the two plans are not coordinated very well regarding capacity. This may be due to the timing of their respective preparation, and to keep the scope of each focused, but the impacts of the restaurants will be high and the space needs to be better justified. Also, the character objective in the County MDP for the base area has the following, relevant characteristics:

1. A transition in density, intensity and character from the center to adjacent Forest Service natural lands.
2. A distinct center, defined both by buildings and activities
3. A mix of land uses, varying from a center of high intensity mixed commercial, skier amenities, accommodation, and recreational uses to lower density areas with predominantly residential/accommodation uses
4. Clear edges, defined both by buildings and open spaces, that distinguish the center from surrounding National Forest lands

Having such large buildings away from the base area conflicts with these characteristics, which were deemed important in the County MDP.

The siting of the summit restaurant is unclear and potentially problematic. In the CTNF scoping document, views to the Grand Teton are mentioned, but the MDP is vague, only saying that "The location of this facility capitalizes on views from the summit of Fred's Mountain." If the Grand Teton is visible from the restaurant, the restaurant will be visible from the Grand Teton and other peaks such as Table Mountain. Part of the beauty of Grand Targhee is that it cannot be seen from many vantage points. Visuals were an important issue during the land swap days, and they remain so today.

The South Bowl development will impact the subalpine and alpine environment here directly, via lift installation and roads. One regional issue that has emerged recently is the impact of skiers on bighorn sheep behavior. The Jackson Hole Mountain Resort terrain is in historic and present bighorn sheep habitat, including winter. Recent tracking of marked ewes (Grand Teton National Park's Mountain Goat Management Plan) show summer use near or possibly within the permit area and proposed expansion area. There may be winter use by either sex near or within the South Bowl area, especially along the Bighorn dolomite cliffs that are around the 9200 to 9400-foot elevation. This may also be a potential or present migration route. The Teton Range bighorn sheep population has been low for many years, and ski-slope development and skiing activity may preclude sheep use in this area, as it appears to be at Jackson Hole Mountain Resort (see work by Aly Courtemanch, well known in this area). Sheep use in the Grand Targhee area, especially the South Bowl, should be investigated. Skier activity and sheep behavior response could be refined as well. The South Bowl area is probably not ideal for this, but any future work at the JHMR could be applied here.

The wilderness character in the nearby Jedediah Smith Wilderness will likely be impacted by the increased access afforded by roads and trails leading to south-east edge of the expanded permit area. The South Leigh Lakes basin, managed as trailless, may become less-so because of increased use, and user-created trails. This has been an issue for many years. Access could remain similar to today along with development of the South Bowl area, but it will take enforcement. Funds for increased enforcement should come from Grand Targhee sources if increased access is found to be detrimental and related to GTR development and activities.

Some historic scenes and their present condition at and near Grand Targhee Resort:



W. H. Jackson 163 US Geological Survey

Peak 9827 (Peaked Mountain) from Peak 9930. July 30, 1872.



M. F. Merigliano US Forest Service Bridger-Teton National Forest

Peak 9827 (Peaked Mountain) from Peak 9930. August 4, 2020.

Madison limestone dominates above the saddle, including the foreground talus. Trees are Engelmann spruce, subalpine fir, and whitebark pine. Jackson's photography date is from his itinerary in the Hayden Survey report for 1872, and is within a day or so of July 30. Many trees extant in 1872 are still present in 2020. Snow cover for late July 1872 is similar to snow cover in late June for normal years, as indicated by SNOTEL data and local observations.



W. H. Jackson 165 US Geological Survey

Fred's Mountain from Peak 9930. July 30, 1872.



M .F. Merigliano US Forest Service Bridger-Teton National Forest

Fred's Mountain from Peak 9930. August 4, 2020.

The geology and vegetation is similar to the previous scene (Jackson 163). Summit rocks have been disturbed by cairn building and later dismantling in the past few years.



W. H. Jackson 1217 US geological Survey

The central Teton Range from near the saddle between peaks 9827 and 9930. July 30, 1872



M. F. Merigliano US Forest Service Bridger-Teton National Forest

The central Teton Range from near the saddle between peaks 9827 and 9930. August 4, 2020

The foreground ridge is within the South Bowl East area. Rock-out crops are Bighorn dolomite. Trees are similar to the other scenes.

Repeat photography is part of a larger project throughout western Wyoming. Credit for Merigliano series indicates a source for imagery. None are copyrighted, but please credit the US Geological Survey and US Forest Service if used elsewhere. I can provide more detail on vegetation and site information if needed upon request.