

September 25, 2020

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**RE: NEPA Review Comments and Recommendations on
Grand Targhee Resort 2020 proposals**

Dear Mr. Bolling,

I am writing to comment on the Grand Targhee Resort Master Development Plan shown in the *Base map 2020 Scoping Notice - Figure 4 - Proposed South Bowl Projects*. Note that three figures referenced in the text are illustrated at the end of this letter.

BACKGROUND

Chapter 6 of the *Grand Targhee Resort 2018 Master Development Plan* outlines upgrades within the headwaters of Miles Creek, part of the South Bowl pod. The plan includes proposed lifts, ski trails, an access road and user facilities to be created, in part, with heavy machinery. According to the plan, mountain bike riders will access the terrain by riding Sacajawea and Peaked lifts, or by riding the Dreamcatcher lift and hiking to the bowl along the ridge.

EXISTING ENVIRONMENT

There are sensitive wetlands, riparian zones, and two low-slope forb meadows (Figure 1 [see end of letter]) containing unique water sources within the proposed South Bowl pod that are more intensively depended upon by wildlife, including elk, than are those in the surrounding terrain.

MEADOW 1: UPPER (NORTHWEST)

The larger upper northwest Meadow 1 is situated at the proposed junction of the South Bowl West and South Bowl Connector lifts. The lift junction is proposed at a seasonal, spring-fed wetland, and includes the riparian zone of its outlet stream, a tributary to Miles Creek. Most years, the spring and outlet stream (Figure 2 [see end of letter]) flow from the initiation of snowmelt until the end of August. This three or more month long period of water supply to the spring and wetlands is in strong contrast to other areas containing only ephemeral, immediate post-snowpack-melt surface water in May through early June. Most other areas in South Bowl (i.e. facing slope) are dominated by summer-dry Douglas fir forest, bedrock residuum, and landslide boulder fields. These critical wetland/riparian/meadow areas naturally exhibit higher densities of tracks and

droppings of elk, deer, moose, bear, and a variety of smaller mammals and birds (including grouse) which indicate that wildlife is more abundant there when compared to adjacent poorly-watered areas.

MEADOW 2: LOWER (SOUTHEAST)

The lower southeast Meadow 2 occurs where the South Bowl Connector and the South Bowl East lifts meet (Figure 1). The proposal requests that a bottom-drive lift and a small guest facility be permitted in this meadow. This meadow is immediately adjacent to a seasonal-flowing segment of Miles Creek. The stream runs from the beginning of runoff until August. For much of the non-winter season, this meadow is utilized by wildlife including elk, in greater concentrations than within adjacent non-watered areas. The proposed access road, bottom-drive lift, and guest facility would nearly engulf this modest-sized meadow, and mountain bike activity enabled by the access road would significantly degrade wildlife use of this grazing/browsing and watering location.

Collectively, these two relatively flat forb meadows compose much less than 1% of the total South Bowl which is otherwise dominated by sloping Douglas fir forest, sloping bedrock, shallow soil over residuum, landslide debris, and cliffs. Thus, the meadows are unique and critical watering locations that daily and weekly attract elk and other game animals and wildlife from surrounding non-watered terrain.

POTENTIAL EFFECTS

PEER REVIEWED RESEARCH ANALYZING SENSITIVITY OF ELK TO HUMAN PRESENCE

Common sense indicates that the elk-rich spring, wetland, riparian and meadow areas will experience wildlife displacement and loss of wildlife nursery (elk calving) due to resort expansion and habitat compression/fragmentation caused by increased non-winter human presence, including mountain bikers that would be enabled by the planned access road.

The USDA Pacific Northwest Research Station, Starkey Project, directed by Mike Wisdom (USDA) (Kantor 2019:2) concludes...

- Elk avoided people and trails associated with all-terrain vehicle (ATV) use, mountain biking, hiking, and horseback riding. Avoidance was strongest in response to ATV use, followed by mountain biking...
- In response to these recreation activities, elk moved to areas where they were less likely to encounter recreationists. Increased movement and flight added energetic costs and decreased foraging times, which can affect animal health and diminish their ability to reproduce.
- Elk stayed hidden from human view as part of avoidance. Extensive forest

thinning increased the field of view and, therefore, the distances that elk maintained from recreationists.

In addition, the study documented that “Elk flight response occurred at distances over 1000 meters (3,218 feet) for ATVs and close to that for mountain bikes...” (Kantor 2019:3).

Finally, According to Wisdom et al. (2018, p 231)...

Avoidance by elk to recreation trails and recreationists represents a form of “habitat compression,” similar to that described for effects of forest roads open to traffic (Wisdom et al., 2000, Rowland et al., 2004, Buchanan et al., 2014, Prokopenko et al., 2016). Habitat compression in response to human activities is a form of habitat loss for species like elk (Rowland et al., 2004, Frair et al., 2008, Buchanan et al., 2014), considering the potentially large areas not used or used less in the presence of humans, and that otherwise might be selected by a species in the absence of humans. Habitat compression can ultimately lead to largescale population shifts by elk from public forests to private lands, thus eliminating hunting and viewing opportunities on public lands (Proffitt et al., 2013).

To address these types of effects, forest managers could use our results to evaluate trade-offs between competing objectives for trailbased recreation and wildlife species like elk that are sensitive to human activities on public forests. Although public forests are governed by laws and policies of multiple use, not all areas can be simultaneously co-managed for recreation and recreation-sensitive wildlife. Different land allocations can accommodate such competing uses, but often on different landscapes with clear objectives about which resources are featured. Optimizing land allocations through spatial analyses of tradeoffs between competing forest uses (Wang et al., 2004), with the inclusion of human ecology mapping (McLain et al., 2013a, 2013b) and stakeholder engagement (Asah et al., 2012a, 2012b) is a forest planning approach that holds promise in helping address recreation and wildlife conflicts. We suggest that such an approach be considered in comanaging trail-based recreation and sensitive wildlife like elk on public forests.

RISK OF ELK HABITAT COMPRESSION TO DIMINISH ELK USE AT MEADOW 1 AND MEADOW 2

Wetlands, meadows, and riparian corridors in and adjacent to Meadows 1 and 2 are areas of greater-than-average elk activity due to utilization of the water source. Permitted, as well as illicit, mountain bike use from a resort-sourced South Bowl access road shown in Figure 1 would cause elk habitat compression. Elk will be negatively impacted if an access road is built. Since any access road into South Bowl will be

utilized by resort lift-sourced mountain bikers, it is disingenuous not to include the South Bowl access road as a “summer project” for effects-assessment.

While an occasional elk may be seen within the currently trailed portion of the permitted Grand Targhee Resort, common sense suggests that since the 1960's elk habitat compression has occurred on public domain within the resort in the name of multiple use. Accelerated marketing of lift-supported mountain biking and associated trail building on the existing permit has increased the pace of elk habitat compression. In the name of a fair allotment of multiple use, non-mountain bike activities such as horseback riding, hiking, wildlife watching, and hunting can be compatible with roadless/trail-less ski run development.

IMPACTS TO DOWNSLOPE FOREST SERVICE SYSTEM AND NON-SYSTEM TRAILS BY RESORT-ENABLED BIKERS

Allowing an access road into South Bowl threatens negative impact to designated wilderness by enabling a direct connection of the proposed access road with a non-system trail at the South Bowl East-South Bowl Connector lift junction (Figure 3 [see end of letter]). This non-system trail probably dates from historic stock camp use. It traverses downhill from Meadow 1 to Meadow 2 (paralleling or underlying parts of the proposed South Bowl access road). Downhill from the South Bowl East-South Bowl Connector lift junction, the non-system trail passes through (or comes very close to) parts of designated wilderness to its junction with the North Fork Teton Creek trail (purple line, approximate on Figure 1). If an access road is placed in South Bowl, lift-enabled mountain bikers will soon discover this non-system trail and begin utilizing it to connect South Bowl to the North Fork Teton Creek trail and thence to the trailhead, potentially trespassing through designated wilderness. In addition, resort-sourced downhill bike traffic on this non-system trail will create dangerous conditions for hikers and backcountry horsemen on the narrow, steep, and rocky North Fork Teton Creek trail from the present location of the large wooden wilderness boundary sign to the parking lot at the Teton Canyon campground. Lift-enabled, resort-sourced mountain bike use on this existing faint, side-hill, non-system trail will lead to trail widening and wash-outs. (The non-system trail is difficult to locate from the downhill junction where it joins FS024. The author is willing to come to the Driggs Ranger District office and point out its downhill junction with FS024 on Google Earth so that Forest Service staff can examine its proximity to designated wilderness.)

RECOMMENDED ON-PROJECT MITIGATION MEASURES

Resort-sourced, non-winter, lift and road assisted human accessibility will lead to elk habit compression, as well as threaten the integrity of downslope system and non-system trails, including potential wilderness area trespass. Thus, permit restrictions should be placed on the development in South Bowl.

- (1) prohibit the use of mountain bikes in South Bowl
- (2) even if an access road was reclaimed after a construction phase, it is impossible to

reclaim a road such that mountain bikes could not utilize it. Once built, it would be impossible to exclude mountain bikes, resulting in greater elk habitat compression and inevitable trespass of bikes onto downslope designated wilderness. Thus, require lifts, runs, and visitor/maintenance facilities to be constructed and serviced using helicopter transport or over-snow construction vehicles only, including all placement of materials and personnel, with no access for wheeled or non-snow-season tracked equipment

(3) prohibit the construction of any ground-debris-cleared ski runs/trails that might be utilized as mountain bike trails

(4) require bonding to protect the Public from increased costs to manage and repair USFS trails:

(4a) damage from resort-sourced downhill mountain bike use of any non-system trail in downslope designated wilderness, and

(4b) any repair or improvement of FS trail 024 from the wilderness boundary to the trailhead in the event that resort-sourced mountain bike traffic damages the trail or increases hazards to hikers/horseback riders

(4c) posting and reposting of *No Bicycle Use* signs and reclaiming any illicit bike trails that enter/exit the South Bowl permit area

(5) require toilet waste, as well as all other trash from the South Bowl, to be removed by over-snow vehicle or helicopter prior to the beginning of spring snowpack melt

(6) include as a permit requirement that the resort prohibit human presence (employees, contractors, guests), including non-emergency maintenance, within 1000 meters (3,218 feet, see quote from Starkey Project above) of both meadows shown in Figure 1 from the initiation of snowpack melt-off to when the meadow springs/streams cease to flow (i.e. May 15 to August 31), thus enabling elk to water undisturbed at these meadows.

OFF-SITE MITIGATION MEASURES

Alternative off-site mitigation measures might be considered by the permitting agency to ameliorate the negative effect of elk habitat compression. .

Elk winter-and-transitional range improvements would help preserve elk populations within the Forest Service portion of the west slope of the Teton Range and could include a combination of:

1. providing, by conservation easement, for willing parties, migration corridors suitable for elk to extend west, across private land from the higher-snow-depth western Teton Range foothills on public land to the lower-snow-depth Teton River bottomlands on private land. This would provide elk with greater winter forage opportunity. Given current land use and property values, it would make sense that such east-west corridors be preserved within the north-south extent

north of Driggs and south of Felt, Idaho.

2. construction of wildlife-safe overpass(es) and fencing over Idaho State Highways 32 and 33 at migration corridor crossings

This off-site mitigation measure would necessitate input from the Wyoming Game and Fish, Idaho Game and Fish, as well as Teton Valley Valley Advocates for Responsible Development, Backcountry Hunters and Anglers (Idaho and Wyoming Chapters), and Rocky Mountain Elk Foundation, among other stakeholders. The latter two organizations represent advocacy groups for elk conservation and should be consulted in formulating a fair valuation of elk habitat loss from the described habitat compression to establish the fair dollar amount to commit to any off-site mitigation measures.

CONCLUSIONS

In conclusion, based on significant risks to wildlife and safeguarding the character and existing usage of designated wilderness, permitted use of South Bowl should be restricted to snow-cat skiing unless all three of the following mitigating conditions are met:

(1) access roads and debris-cleared trails are banned,

(2) mountain bikes are excluded, and

(3) all resort use including maintenance ceases within 1000 m of the two meadows shown on Figure 1 within the non-snowpack season. If offsite mitigation is used to ameliorate elk habitat compression at Meadows 1 and 2, this should be done in collaboration with Backcountry Hunters and Anglers and Rocky Mountain Elk Foundation among other stakeholders.

References

Kantor, Sylvia

2019 Seeking Ground Less Traveled: Elk Responses to Recreation. Electronic document, <https://www.fs.fed.us/pnw/science/scifi219.pdf>, accessed 08/30/2020

Wisdom, M.J.; Preisler, H.K.; Naylor, L.M., et al.

2018 Elk responses to trail-based recreation on public forests. *Forest Ecology and Management* 411:223–233. Electronic document,

https://www.fs.fed.us/pnw/pubs/journals/pnw_2018_wisdom001.pdf, accessed 08/30/2020

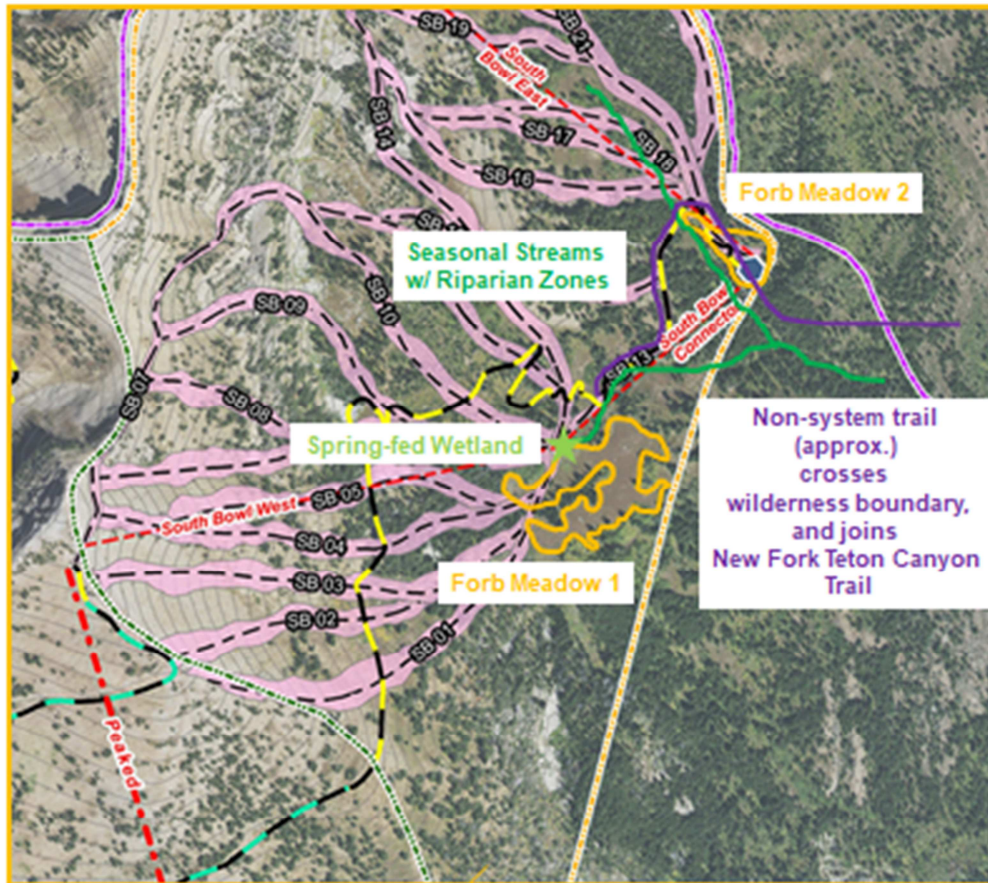


Figure 1. Seasonal spring-fed wetland (light green star), seasonal streams (dark green lines), relatively level forb Meadows 1 and 2 (gold polygons) in South Bowl showing proximity to proposed lifts (red dashed lines), proposed road (yellow and black dashed line), and non-system hiking/horse trail (purple line) that enters designated wilderness (violet line with white border). Base map 2020 Scoping Notice - Figure 4 - Proposed South Bowl Projects.



Figure 2. Wetland outlet stream downstream from wetland near lower terminus of proposed South Bowl West Lift (July 2019).

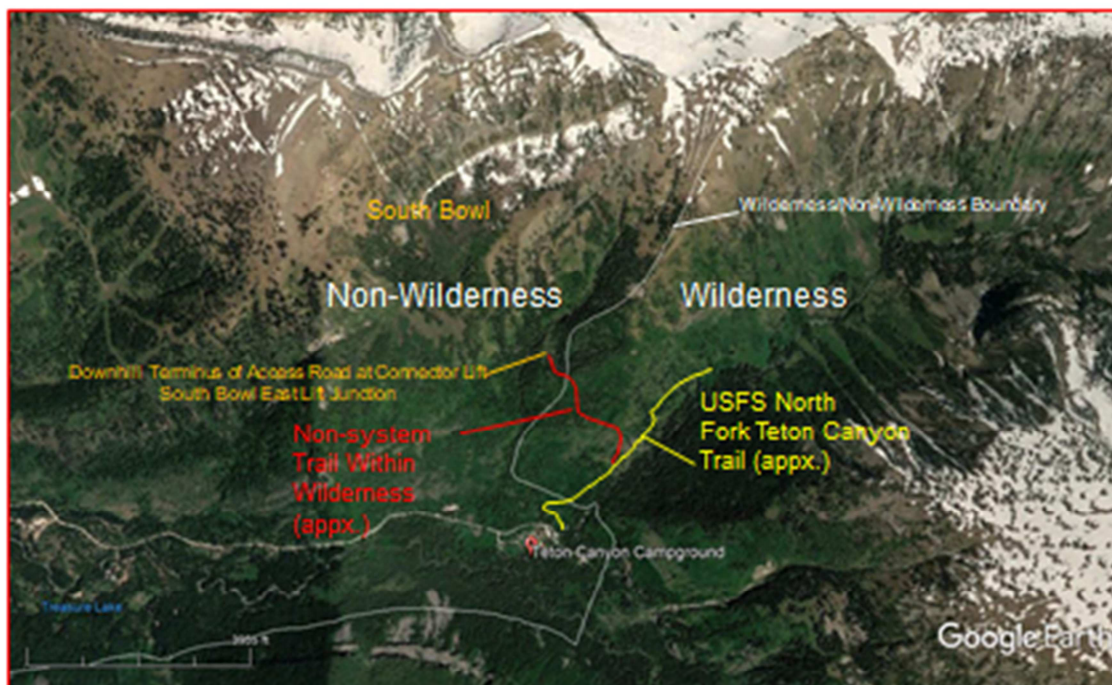


Figure 3. Lower portion of non-system foot and horse trail shown downslope from the junction of Connector Lift with the South Bowl East Lift in Meadow 2. Below the terminus of the proposed access road, the non-system trail passes through designated wilderness. The proposed access road with enable lift-assisted mountain bike traffic to easily access the non-system trail thus tempting users to continue downhill on it, thus trespassing on designated wilderness and causing traffic and safety issues on the rocky and narrow lower portion of the USFS North Fork Teton Creek trail.