From: Patrick Cross
To: FS-travel-comments-rocky-mountain-shoshone
Subject: Shoshone National Forest Travel Management Plan #48573
Date: Monday, July 18, 2016 2:30:57 PM

Dear Rob Robertson:

I am writing to comment on the proposed Shoshone National Forest Travel Management Plan (#48573), specifically on winter travel planning in the High Lakes area.

[redacted] going over the Beartooth Highway every summer, including 12 Memorial Day Weekends skiing on the Beartooth Pass since 2002. I also conducted wildlife research in the area between 2011 and 2015 that included living at the Beartooth Lake Campground for two winters in 2013 and 2014, during which I recorded observations of snow conditions, wildlife activity, and other details affecting/affected by snowmobile travel throughout the proposed season.

I support the proposed plan that closes the area to snowmobiles on April 30 as this would reduce impacts on 1.) Wildlife, including a.) emerging bears, b.) subnivean small mammals, c.) migratory and ground-nesting birds, d.) native red foxes, e.) and other mammals; 2.) Vegetation including alpine tundra communities and the threatened whitebark pine; and 3.) other recreational uses, including skiing and more passive uses like enjoying nature and the mountain scenery. However, with changing environmental conditions generally trending towards earlier snowmelt, I feel that defining a specific date such as April 30 is only a temporary, stopgap measure until adaptive seasons that take into account critical environmental thresholds (like minimum snow depths and/or densities) and take advantage of modern modeling and remote sensing technology (including the Beartooth Lake SNOTEL) are developed. Below I have specific justifications for my concerns:

1.) IMPACTS ON WILDLIFE

1a.) EMERGING BEARS:

The following table lists the first bear tracks I observed each season during extensive snow tracking surveys conducted between Muddy Creek and Fantan Lake as part of my native fox research (Patrick Cross, personal observations):

YEAR - DATE - LOCATION - SPECIES/NUMBERS

2011 - June 1 - Beartooth Butte - Grizzly with three cubs

2012 - May 19 - Clay Butte - Grizzly

2013 - May 9 - Island Lake - Black Bear

2014 - May 19 - Beartooth Butte - Black Bear

The proposed April 30 closing date runs right up to the first emergence of bears in the area. Indeed, it may be too close to the bears' date of emergence, especially if that date becomes earlier with shrinking snowpacks and warmer winters. Since the area is critical denning habitat for grizzly and black bears, I think it is important to consider any possible disturbance to these animals in this sensitive time of year.

1b.) SUBNIVEAN SMALL MAMMALS:

Small mammals such as voles and pocket gophers can be affected by oversnow travel when the snowpack is low (Olliff *et al.* 1999). This may include collapsing of subnivean tunnels, which may in fact be worse with skiers due to greater foot loading and track sink, and the deposition of poisonous gases, which in this case is restricted to the snowmobilers. Although deep snowpacks generally mitigate these effects mid-winter, they are most likely to have an impact in the spring when the snowpack is lower. These small mammal communities are a critical component of the subalpine ecosystem and form the prey base of native carnivores like the red fox.

1c.) MIGRATORY AND GROUND-NESTING BIRDS:

Spring is when migratory birds, such as the gray-crowned rosy finch, horned lark, and common redpoll, stopover in the Beartooths enroute to the Arctic, while ground-nesting birds that breed on the Beartooth Plateau, like the American pipit, white-crowned sparrow, and dark-eyed junco, are just beginning to arrive and look for nesting sites (Hendricks 1990, Patrick Cross personal observations). Disturbance of these birds in such critical habitat may have repercussions here and in other parts of their range far from the Beartooth Plateau. Resident birds present in midwinter, like the Stellar's jay, gray jay, and Clark's nutcracker, are likely less impacted by snowmobiles since they 1.) prefer denser forests, 2.) are arboreal (found higher in the canopy), and 3.) are residents so have more flexibility in available habitats. But spring birds that are out on the ground, on the same open slopes that snowmobilers (and skiers) use, and are already stressed by migration and/or the onset of breeding season, are more likely to be impacted. They too provide a food source for resident carnivores in addition to other ecosystem services.

1d.) NATIVE RED FOX

The Beartooth Plateau is home to a population of native red foxes (Cross 2015). Although direct impacts of snowmobile disturbance likely have little effect on the adaptable foxes—much of their range is already protected in wilderness areas and national parks—any threats to major food sources such as subnivean rodents or the eggs of ground-nesting birds, especially when concentrated in popular recreation areas, could have significant local impacts on particular fox territories. That is because the foraging range of adult foxes is much reduced when they have a litter of kits to provision back at the den, and the survival of those recently born kits—and hence recruitment of the next generation of foxes—depends on the ability of the adults to feed them. Direct interference with hunting foxes and/or a reduction in food sources near dens could therefore have detrimental effects on this small population. A den located across the road from the Top of the World Store is a perfect example of one most likely to be affected as it is surrounded by accessible and popular snowmobile terrain.

1e.) OTHER MAMMALS

Thirty-seven mammalian species have been observed on the Beartooth Plateau, ranging from the dwarf shrew—the smallest known mammal—up to the moose (Pattie and Verbeek 1967). Many of these species, especially the large ungulates, are migrating to higher elevations at this time of year, so disturbance from any recreation including snowmobiles likely has an impact. During the winters of 2013 and 2014, I passed a total of six moose on four occasions while snowmobiling, all of which resulted in high stress responses—vigilance or running away—by the moose.

2.) IMPACTS ON VEGETATION

When there is not a continuous snowpack, like in the spring, I frequently observe snowmobile tracks crossing snow-free land between patches of snow: this Memorial Day Weekend (2016), I observed snowmobile as well as snow cat tracks going across snow-free tundra between the stateline and the West Summit on the Beartooth Pass. This destroys vegetation including sensitive grasses and cushion plants growing on the alpine tundra, often leaving permanent tracks, as well as whitebark pine saplings, many of which display scars from snowmobile damage. This tree is a keystone species, a critical food source for a variety of Beartooths species including grizzly bears and native red foxes, and considered warranted for U.S. Endangered Species Act protection. These sapplings are necessary for the population to recover from declines attributed to mountain pine beetles, white pine blister rust, drought stress, and other factors. Any potential threat to whitebark pines should therefore be taken seriously, both for the sustained viability of the species and ecological communities that depend on it as well as the socio-economic factors, including recreation, that would be affected by any ESA protections. And the best way to protect whitebark pines from

mechanical damage in the spring, whether caused by snowmobiles or natural factors like blowing snow and ice, is with a deep snowpack to insulate and protect saplings until milder summer months: another reason for adaptive season limits that take the current snowpack into account.

3.) IMPACTS ON OTHER USERS

Late season snowmobile use also impacts other users on the Beartooth Highway, which is not a problem earlier in the season when the closed road restricts access by other users. Increasingly popular "hybrid skiing"—using snowmobiles for uphill travel while downhill skiing—can especially impact traditional skiers as these uses occupy the same areas and the tracks of just a few snowmobiles/hybrid skiers will drastically reduce the snow quality for other skiers, effects that may persist for the remainder of the season. This was apparent Memorial Day Weekend this year (2016) at the Gardiner Headwall. This is usually a very popular area for skiers as well as other highway users who get out and watch the skiers, but this year just a few snowmobiles/hybrid skiers had carved deep tracks across the entire basin, making it unskiable following the evening freeze up. There was a noticeable decrease in the number of people at the parking lot there while these snowmobiles/hybrid skiers were in the area, and the noise from their snowmobiles was very loud in the confined basin. Skiing on the Beartooth Pass over Memorial Day Weekend has been a local tradition for as long as I can remember: it would be a shame if this low impact tradition enjoyed by many was spoiled by a high impact activity that accommodates few.

Allowing snowmobiles during the summer ski season also increases the risk of snowmobilers/hybrid skiers unknowingly, or knowingly, entering closed wilderness areas: on Memorial Day last year (2015), a party of snowmobilers/hybrid skiers from Jackson, WY, blatantly ignored the posted wilderness sign north of the Montana-Wyoming stateline as well as numerous individuals (including myself) who told them that snowmobiles were not allowed, responding either with contempt or feigned ignorance, depending on the situation.

Snowmobiling is a time-honored recreational activity on the Beartooth Plateau, but it has never been a part of the local Memorial Day tradition. This plan that keeps the High Lakes area open in midwinter to snowmobilers—the majority of whom are local folks or frequent visitors who are very respectful of the landscape and have Beartooth traditions of their own—will keep that form of popular recreation viable for years to come while mitigating the disturbance, damage, and conflicts caused later in the season.

Thank you, also these comments represent my own views as a private American citizen [redacted] and do not necessarily represent those of my employer or associates.

Patrick Cross

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LITERATURE CITED:

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