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October 12, 2020

WER 6312.03
U.S. Forest Service
Grand Targhee Resort
2018 Master Development Plan Projects
Teton County

Mel Bolling
c/o Jay Pence
Teton Basin District Ranger
U.S. Forest Service
P.O. Box 777
Driggs, ID 83422
Jay.pence@usda.gov

Dear Mr. Bolling,

The staff of the Wyoming Game and Fish Department (Department) has reviewed the 2018 Master Development Plan Projects located in Teton County. We offer the following comments for your consideration.

Thank you for the opportunity to provide comments during the scoping process for the Grand Targhee Master Development Plan Projects. The Department and Caribou-Targhee National Forest (CTNF) have a long history of working collaboratively on wildlife and habitat issues on the Teton Basin Ranger District, and we appreciate your partnership in these endeavors. The 1997 Revised Targhee National Forest Plan contains specific language in the Teton Range Subsection regarding coordination between CTNF and the Department “in the management of the bighorn sheep population and habitat” (pg. 111-56). In this spirit of coordination, we respectfully request cooperating agency status during development of the Environmental Impact Statement (EIS) for this project.

We have reviewed the scoping letter and associated projects outlined in the 2018 Grand Targhee Master Plan and offer the following comments for your consideration.

General Comments

The proposal includes projects within the existing Grand Targhee Special Use Permit Boundary (SUP), as well as two proposed SUP expansion areas: Mono Trees (~600 acres) and South Bowl (~600 acres). The proposed projects within the existing SUP area include new ski lifts, lift replacements and upgrades, lift realignments, new lighting, glading, terrain grading, road

rehabilitation, increased snowmaking, a new restaurant at the summit of Fred's Mountain, a new restaurant/bar/restrooms facility at the top of Sacajawea lift, approximately 29 miles of new mountain biking and hiking trails, additional Nordic ski trails, several new yurts, a zipline, and an aerial adventure course. We recognize the emerging needs for ski resorts to diversify their activity offerings and enhance outdoor experiences for visitors. Although these proposed projects within the existing SUP boundary will likely have some negative impacts to wildlife that will add to those already resulting from the existing development, we recognize the Forest Plan Management Prescription for this area as 4.2 Special Use Recreation Site for developed recreation. Therefore, we do not have comments or concerns related to these projects within the existing SUP boundary.

The Department is primarily concerned about how the two proposed SUP expansion areas will impact currently intact wildlife habitat, especially the South Bowl expansion into Teton Canyon. It would be helpful for the forthcoming EIS to describe in more detail the specific purpose and need for expansion into the Mono Trees and South Bowl areas in order to weigh the benefit of an expansion against the potential adverse impacts to wildlife and wildlife habitat. We also recommend the EIS include alternatives and corresponding analysis that 1) restrict proposed projects to within the existing SUP boundary without any expansion areas, and 2) restrict proposed projects to within the existing SUP boundary and only the Mono Trees Expansion Area. Lastly, the 1997 Revised Targhee Forest Plan shows Teton Canyon within the 3.2(b) – Semi-Primitive Motorized management prescription (pg. 111-120) instead of the 2.1.2 Visual Quality Maintenance management prescription referenced in the scoping letter. Therefore, it is unclear within which management prescription area the proposed SUP expansions would occur.

Bighorn Sheep

Background of the Targhee Bighorn Sheep Herd

The Department's main concern regarding this proposal is the expansion of the SUP boundary into the South Bowl area (Figure 1) and the associated impacts to bighorn sheep winter habitat, summer habitat, and movement path to a natural mineral lick in Teton Canyon. Here, we provide background describing the importance of the Targhee Bighorn Sheep Herd and the interagency efforts that have occurred over the past several decades to conserve this herd. The Targhee Bighorn Sheep Herd (also known as the Teton Bighorn Sheep Herd) is a small, isolated population that lives in the Teton Mountain Range and uses habitat within the CTNF, Bridger-Teton National Forest (BTNF), and Grand Teton National Park (GTNP). Historically, the majority of bighorn sheep in this population spent the summer at high elevations and moved to low elevation winter ranges (Whitfield 1983). However, due to a multitude of factors these seasonal movements disappeared by about 1950. Since then, the population has been non-migratory and spends the summer *and* winter at high elevations in the Teton Range. The herd persists on small areas of wind-blown winter habitat where food is scarce and energetic demands are high due to cold temperatures and surrounding deep snow. Additionally, mortality due to avalanches can be relatively high during some winters. The herd is currently estimated to be approximately 125 sheep

and appears to be stable, although very small. Over the past 40 years, aerial surveys have documented between 40-100 sheep in the herd (Wyoming Game and Fish Department Job Completion Reports, 1980-2019).

The Targhee Herd is important within the State of Wyoming because it was classified as a core, native herd in the Wyoming Statewide Bighorn/Domestic Sheep Interaction Working Group Plan (2004), and Wyoming Statute § 11-19-604. It is the smallest and most isolated of the four core, native herds in Wyoming. The herd has received a significant amount of attention, primarily through efforts to protect the herd from interaction with domestic sheep through willing-seller/willing-buyer allotment negotiations and subsequent allotment closures by the CTNF, resulting in the removal of all domestic sheep grazing in the Teton Range. The South Bowl SUP Expansion Area is within the former Table Rock – Mill Creek Sheep and Goat Allotment.

Interagency Coordination Efforts

Since the early 1980s, there has been concern about the future persistence of this herd due to its small size and limited winter habitat. Throughout the 1980s and early 1990s, Department biologists documented concerns in annual Job Completion Reports about the herd. In the early 1990s, the Teton Range Bighorn Sheep Working Group was formed and included representatives from the CTNF, BTNF, GTNP, the Department, and several other local bighorn sheep experts. This group has been active for the past three decades and has successfully worked together to conserve this herd through interagency research, monitoring, habitat improvement projects, public education, and other efforts. Over one million dollars in non-governmental funding has been put toward various conservation projects for the herd, in addition to significant government agency funding and staff time that has been dedicated to carrying out these efforts.

In March 2019, the Teton Range Bighorn Sheep Working Group convened a panel of scientists from around the western United States with expertise in the ecology, demographics, genetics, habitat requirements, nutrition, and management of bighorn sheep and epidemiology of bighorn sheep diseases, such as pneumonia. The working group asked this expert panel to review the existing research, state of knowledge, and management strategies for the Targhee Herd and identify critical data gaps, recommend strategies to improve population resilience, and prioritize management actions with the working group (Teton Bighorn Sheep Working Group, 2020). Three recommendations from the expert panel that directly apply to this scoping proposal are 1) prioritize protection of the small areas of remaining winter habitat for the Targhee Herd; 2) expand winter habitat through restoration projects using prescribed fire and/or managing natural wildfires, where appropriate; and 3) work with the community to limit human disturbance to bighorn sheep during the winter.

Over the past two years, the working group has focused its attention on undertaking a community-based collaborative process to find solutions to balance winter recreation and Targhee bighorn sheep habitat needs. Recent research showed that backcountry winter recreation was displacing

Targhee bighorn sheep from important winter habitat (Courtemanch 2014). Over \$50,000 from the Community Foundation of Jackson Hole, Grand Teton Association, Bridger-Teton National Forest, Wyoming Wild Sheep Foundation, Winter Wildlands Alliance, Teton Backcountry Alliance, and the Department has been dedicated to this community collaborative effort. The working group conducted over 50 one-on-one conversations with key stakeholders and held three collaborative public meetings for which over 120 people attended. Participants included frontcountry and backcountry skiers, guiding companies, recreation advocacy organizations, conservation organizations, County Commissioners, Jackson Hole Mountain Resort representatives, hunters, local conservationists, and other interested members of the public. Through this process, the community drafted a long list of recommended solutions for the working group to consider and present to CTNF, BTNF, GTNP, and Department decision-makers for potential implementation. This community process is still continuing and we expect that final recommendations will be made during winter 2020-2021.

Winter Habitat in Teton Canyon

Bighorn sheep winter habitat occurs throughout the north side of Teton Canyon, including the proposed South Bowl SUP expansion area. Historical winter habitat, occurs below and to the west of the South Bowl (Whitfield, 1983) (Figure 2). Based on GPS-collar data from 25 bighorn sheep ewes in the Targhee Herd and a resource selection function completed by Courtemanch (2014), Teton Canyon and the South Bowl contain the two highest tiers of winter habitat classification (Figure 3). Areas in Teton Canyon that are mapped as second highest quality winter habitat (shown in orange in attached figures) would shift to higher quality if the amount of trees and shrubs are reduced. The Department's bighorn sheep seasonal range maps have not yet been updated with this new information.

Expansion of recreation into the South Bowl SUP area would lead to new and increased levels of disturbance, resulting in a direct loss of bighorn sheep winter habitat, which is already limited. In addition, we are concerned about impacts to adjacent winter habitat areas. It is reasonable to expect that visitor out-of-bounds skiing would increase around the proposed South Bowl and Mono Trees SUP expansion areas, leading to indirect bighorn sheep habitat loss through human activity disturbance (Courtemanch 2014). The South Bowl expansion area would allow for relatively easy access to backcountry areas to the east along the divide between North Fork of Teton Canyon and South Leigh Creek to the GTNP boundary. We are also concerned that backcountry skiing activity would increase in the Apostles Cliffs below the Mono Trees expansion area, which is where the natural mineral lick is located. The current scoping proposal does not detail whether there would be any new gates allowing public access outside of the resort and how this would or would not be managed. We encourage the Forest Service to include an analysis of the impacts on wildlife, including bighorn sheep, from new backcountry access points and increased numbers of recreationists in areas with previously low use. The proposal also mentions the need for avalanche control in the South Bowl, which would introduce significant noise into Teton Canyon. We suggest

that the expected levels and frequency of noise are disclosed and analyzed for their potential effects on wildlife.

In addition to current winter habitat, several low and mid elevation canyons on CTNF are known to be historical winter range for this herd, including Moose Creek, Fox Creek, Darby Creek, and lower Teton Canyon (Whitfield 1983). From 1970-2000, there was little documentation of bighorn sheep using these areas due to high numbers of domestic sheep and vegetation succession from lack of fire (Wyoming Game and Fish Department, 1988; Wyoming Game and Fish Department, 1990). However, after domestic sheep allotments were closed in the late 1990s and early 2000s, we documented a significant shift by bighorn sheep back into many of the former allotments, including historical winter ranges in Fox Creek and Darby Creek. Bighorn sheep have been documented using Teton Canyon in the summer months in recent years, however less winter use has been documented. We suspect that bighorn sheep have not recolonized historical winter ranges in Teton Canyon due to the advanced vegetation succession present in the canyon (i.e., high shrub and tree densities due to lack of fire). However, there has been sporadic use in the canyon, especially by rams, which has been documented on a GTNP remote camera in the Apostles Cliffs between 2017 and 2020, as well as one verified observation by the Department in early April 2017 of a ram in lower Teton Canyon. There is also an unverified public report of a ram in the South Bowl in February 2018. The lack of data of bighorn sheep use in Teton Canyon, especially during the winter, could also be a result of very few rams being collared ($n=2$) during research efforts from 2008-present.

In order to restore historical winter range areas in Teton Canyon, the Department has worked collaboratively with CTNF to plan and design the Teton Canyon Hazardous Fuels Reduction Project (decision signed June 2018), which will include prescribed fire treatments to restore approximately 840 acres of bighorn sheep habitat (Figure 4). We expect that bighorn sheep will expand into this area and start using it immediately since some animals already visit the area throughout the year. This project is a rare opportunity to restore historical low elevation bighorn sheep habitat in the Tetons. The majority of sheep habitat occurs within designated Wilderness or within GTNP, which are areas where targeted habitat treatments are not possible. This project could also result in an excellent scenario for public viewing of bighorn sheep. Historical bighorn sheep habitat in lower Teton Canyon is visible from the Teton Canyon Road and winter groomed trail, as well as the Reunion Flats Campground. Approximately, 279 acres of the proposed prescribed burn are within the South Bowl SUP expansion area and the rest are below or directly west of the South Bowl. If the South Bowl SUP expansion area is approved, it will impact the current opportunity to restore historical bighorn sheep winter habitat in Teton Canyon.

Summer Habitat in Teton Canyon

Bighorn sheep summer habitat is present in Teton Canyon in larger quantities than winter habitat (Figure 5). Summer habitat was mapped using an RSF based on 25 GPS-collared ewes (Courtemanch 2014, Courtemanch et al. 2017) (Figure 5). Summer use by bighorn sheep has also

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been documented, including a GPS-collared ewe that visited the area in the summers of 2008 and 2009 with a lamb at heel both years (Courtemanch 2014) (Figure 5). In addition to this collared ewe, there have been public reports of mixed ewe/lamb groups in the South Bowl, as well as one Department observation, which show that nursery groups use this area. Ram groups have also been observed throughout the north side of Teton Canyon, including the South Bowl and Apostles Cliffs (Figure 5). There has been a remote camera established at the natural mineral lick from 2017 – present, which documented at least 13 unique adult rams (based on distinct horn morphology) using the area in 2018. This is roughly 30% of the total estimated rams in the Targhee Herd.

Movement to Natural Mineral Lick in Teton Canyon

A natural mineral lick occurs down canyon from the South Bowl SUP expansion area in the Apostle Cliffs. Mineral licks are localized habitat features that are relatively rare on the landscape and important to the health of mountain ungulates (Holl & Bleich 1987, Ayotte 2005, Mincher et al. 2008). High levels of human use or disturbance along movement paths to limited point resources (e.g., watering holes or mineral licks) can prevent animals from visiting (Leslie & Douglas 1980, Keller & Bender 2007). There are a small number of known mineral lick sites that receive consistent visitation by bighorn sheep in the Teton Range (Courtemanch 2014, GTNP unpublished data). It is not known whether bighorn sheep that use the Teton Canyon lick site also use other licks. Therefore, impeding bighorn sheep access to the Teton Canyon mineral lick could cause health impacts to those individuals. Since approximately 30% of rams in the Targhee Herd appear to be using the Teton Canyon lick, as well as nursery groups, it is likely an important source of minerals for this population.

The GPS-collared ewe that visited this lick in 2008 and 2009 moved through the proposed South Bowl SUP expansion area to get there (Figure 6, Figure 7). Based on the configuration of sheep habitat in Teton Canyon, it is reasonable to assume that most or all of the sheep move through the South Bowl to get to and from the lick. The area below the proposed South Bowl SUP expansion and on the south side of Teton Canyon is not suitable bighorn sheep habitat, and therefore sheep are unlikely to adopt a new path to access the mineral lick. The Department is concerned that development within the proposed South Bowl SUP expansion area would prevent bighorn sheep from accessing the mineral lick. Even though not proposed at this time, we are concerned the proposed development in the South Bowl would increase the possibility of summer activities being permitted in the future. Even if summer recreation activity does not occur in the South Bowl SUP expansion area, the infrastructure from winter skiing (i.e., buildings, ski lifts, roads, etc.) could deter bighorn sheep from moving through this area. As a similar comparison, bighorn sheep summer habitat exists within the Jackson Hole Mountain Resort boundary, but there have never been documented observations of sheep moving through the area.

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Moose

Moose utilize habitats in Teton Canyon year-round, and Department Wildlife Observation System (WOS) records indicate this area is used by moose in the winter (Figure 8). There are no records of moose in the proposed South Bowl or Mono Trees SUP expansion areas; however, these areas would provide easier access for out-of-bounds skiing and could potentially increase disturbance to moose during the winter. We recommend the EIS include an analysis of expected levels of out-of-bounds skiing, if and how Grand Targhee may manage access to out-of-bounds use, and how this activity may impact moose.

Thank you for the opportunity to provide comments. We look forward to continued participation in the development of the EIS for this project. If you have any questions, please contact Doug McWhirter, Jackson Region Wildlife Management Coordinator, at 307-733-2321.

Sincerely,

A handwritten signature in black ink, appearing to read "Amanda Losch". The signature is fluid and cursive, with the first name being the most prominent.

Amanda Losch
Habitat Protection Supervisor

AL/mf/ct

cc: U.S. Fish and Wildlife Service
Doug McWhirter, Wyoming Game and Fish Department
Aly Courtemanch, Wyoming Game and Fish Department
Joe Budd, Office of Governor Gordon
Chris Wichmann, Wyoming Department of Agriculture

Literature Cited

- Ayotte, J. B. 2005. Ecological importance of licks to four ungulate species in north-central British Columbia. doi:<https://doi.org/10.24124/2005/bpgub324>
- Courtemanch, A. B. 2014. Seasonal habitat selection and impacts of backcountry recreation on a formerly migratory bighorn sheep population in northwest Wyoming, USA, MS Thesis, University of Wyoming, Laramie, WY.
- Courtemanch, A. B., M. J. Kauffman, S. A. Kilpatrick, and S. R. Dewey. 2017. Alternative foraging strategies enable a mountain ungulate to persist after migration loss. *Ecosphere* 8: 1-16.
- Holl, S. A. and V.C. Bleich, V. C. 1987. Mineral lick use by mountain sheep in the San Gabriel Mountains, California. *The Journal of Wildlife Management* 383-385.
- Keller, B.J and L.C. Bender. 2007. Bighorn sheep response to road-related disturbances in Rocky Mountain National Park, Colorado.
- Leslie Jr, D.M. and C.L. Douglas. 1980. Human disturbance at water sources of desert bighorn sheep. *Wildlife Society Bulletin* 284-290.
- Mincher, B. J., R. D. Ball, T. P. Houghton, J. Mionczynski, and, P. A. Hnilicka. 2008. Some aspects of geophagia in Wyoming bighorn sheep (*Ovis canadensis*). *European Journal of Wildlife Research* 54 (2): 193-198.
- Teton Range Bighorn Sheep Working Group. 2020. Teton Range Bighorn Sheep Herd Situation Assessment. Unpublished Report. 30pp. Available at: <https://www.tetonsheep.org>
- Whitfield M. B. 1983. Bighorn sheep history, distribution, and Habitat relationships in the Teton Mountain Range, Wyoming. MS Thesis, Idaho State University, Pocatello, ID.
- Wyoming Game and Fish Department. 1988. Targhee Bighorn Sheep Herd Job Completion Report. 15pp.
- Wyoming Game and Fish Department. 1990. Targhee Bighorn Sheep Herd Job Completion Report. 18pp.
- Wyoming State-wide Bighorn/Domestic Sheep Interaction Working Group. 2004. Final Report and Recommendations. 17pp.



Figure 1. View of the north side of Teton Canyon from the Table Mountain trail. The black line represents the approximate area of the proposed South Bowl Special Use Permit Expansion Area.

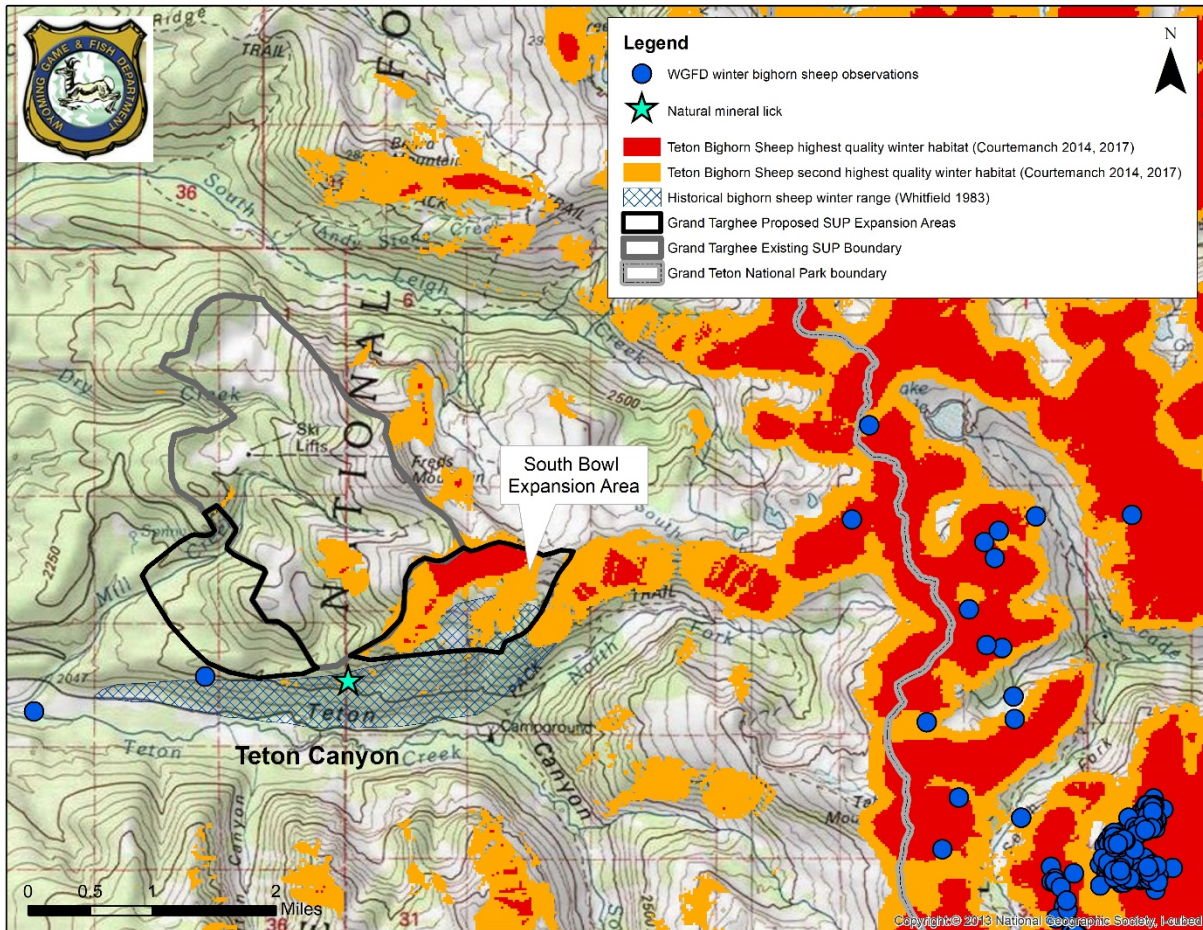


Figure 2. Targhee bighorn sheep winter habitat and winter observations in the greater Teton Canyon area. Targhee bighorn sheep winter habitat (highest quality (red) and second highest quality (orange) from Courtemanch 2014 and Courtemanch et al. 2017); winter bighorn sheep locations from Wyoming Game and Fish Department Wildlife Observation Database and GPS-collared sheep (blue dots); Teton Canyon natural mineral lick (star); historical bighorn sheep winter range (hashed blue) (Whitfield 1983); current Grand Targhee Special Use Permit area (grey line), and proposed special use permit expansion areas (black lines).

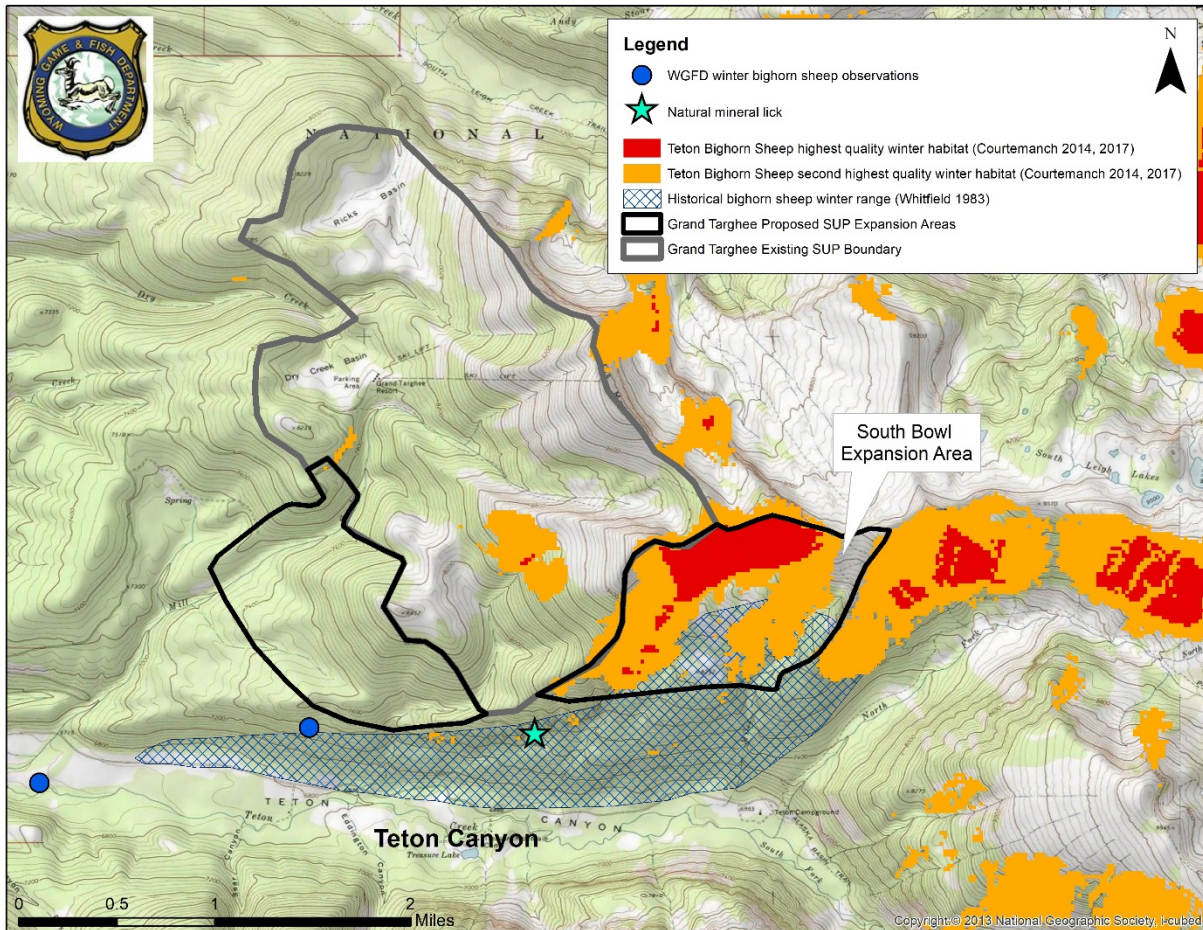


Figure 3. Targhee bighorn sheep winter habitat and winter observations in the vicinity of the proposed project. Targhee bighorn sheep winter habitat (highest quality (red) and second highest quality (orange) from Courtemanch 2014 and Courtemanch et al. 2017); winter bighorn sheep locations from Wyoming Game and Fish Department Wildlife Observation Database (blue dots); Teton Canyon natural mineral lick (star); historical bighorn sheep winter range (hashed blue) (Whitfield 1983); current Grand Targhee Special Use Permit area (grey line); and proposed special use permit expansion areas (black lines).

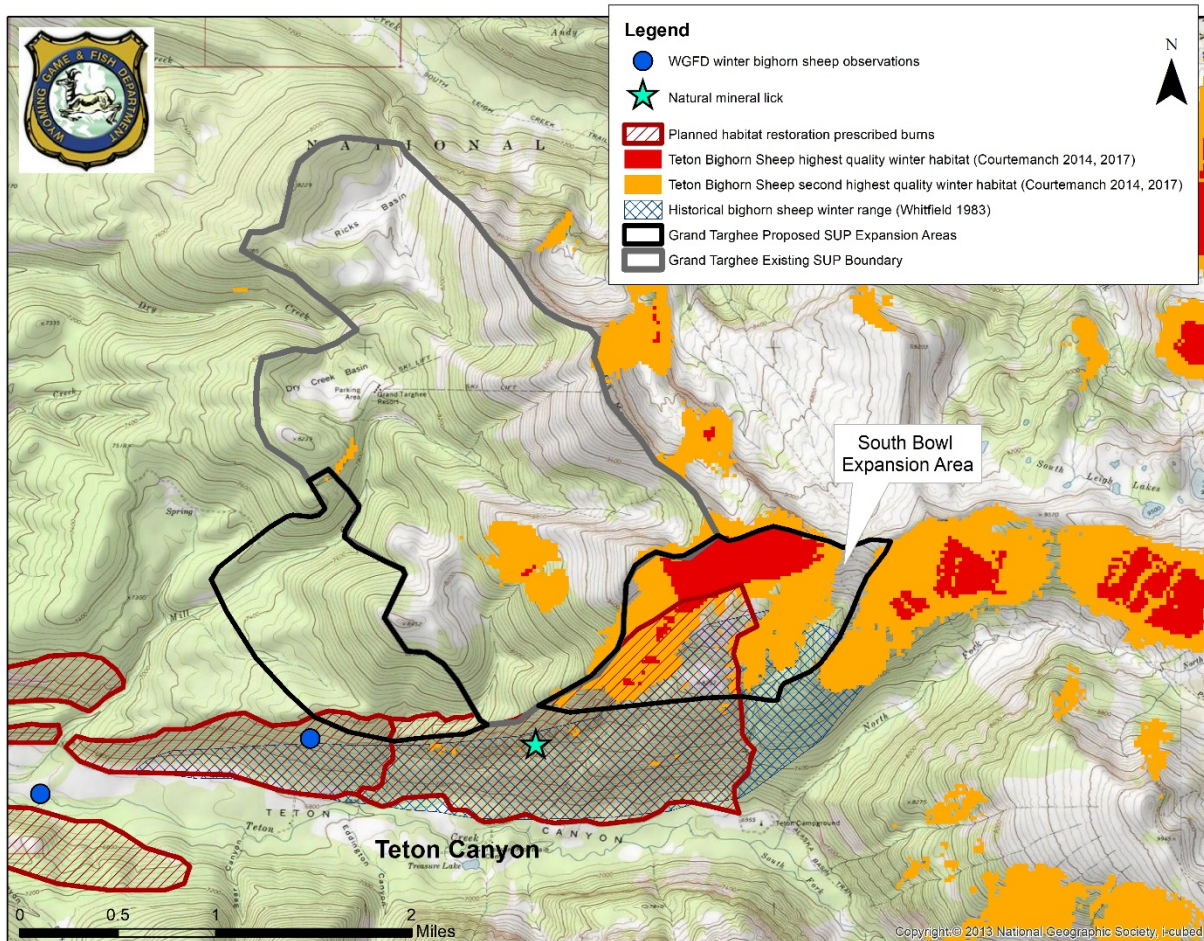


Figure 4. Targhee bighorn sheep winter habitat and planned Teton Canyon Hazardous Fuels Reduction Project prescribed burn areas that would restore bighorn sheep habitat. Targhee bighorn sheep winter habitat (highest quality (red) and second highest quality (orange) from Courtemanch 2014 and Courtemanch et al. 2017); winter bighorn sheep locations from Wyoming Game and Fish Department Wildlife Observation Database (blue dots); Teton Canyon natural mineral lick (star); historical bighorn sheep winter range (hashed blue) (Whitfield 1983); planned prescribed burn areas (hashed red); current Grand Targhee Special Use Permit area (grey line); and proposed special use permit expansion areas (black lines).

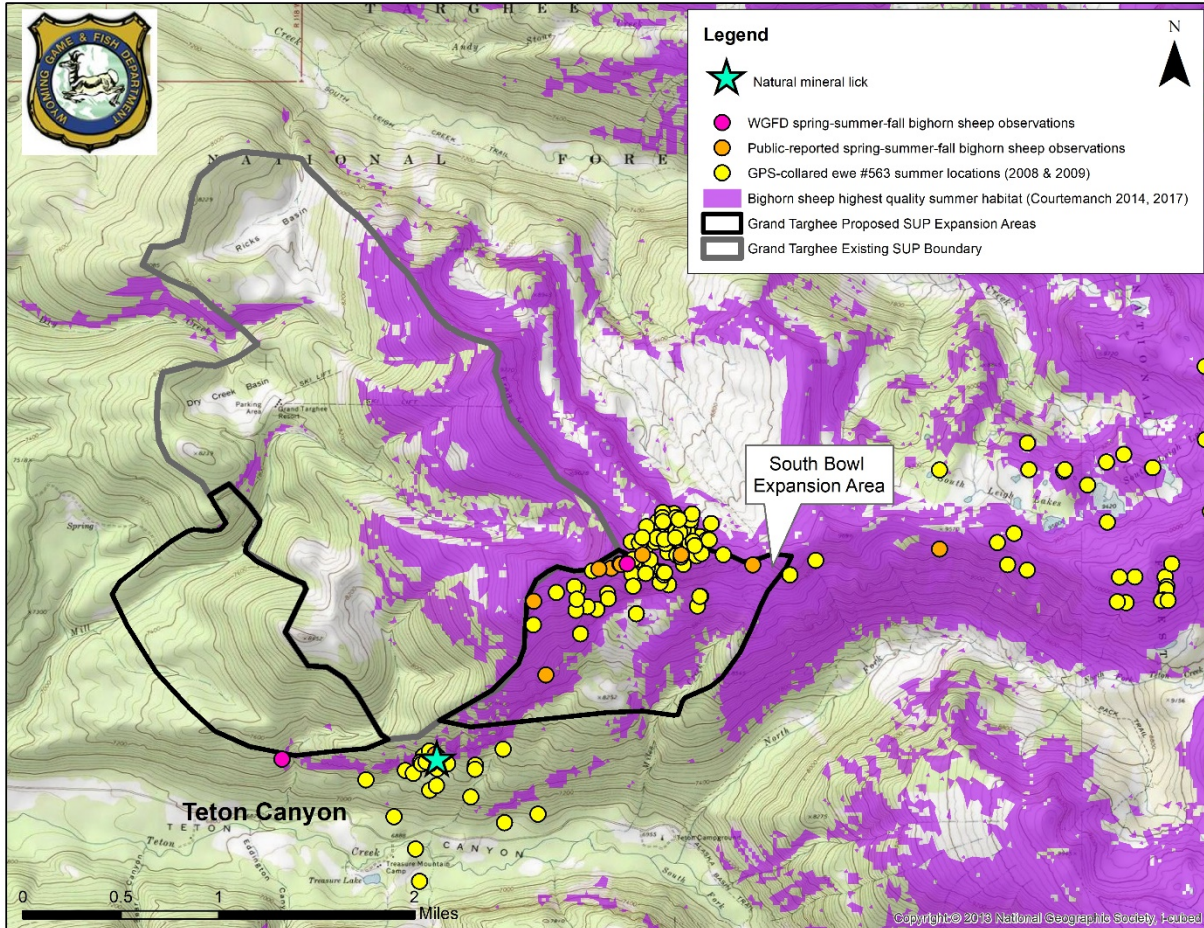


Figure 5. Targhee bighorn sheep summer habitat and summer observations in the vicinity of the proposed project. Targhee bighorn sheep summer habitat (purple) (from Courtemanch 2014 and Courtemanch et al. 2017); Wyoming Game and Fish Department summer bighorn sheep observations (pink dots); public-reported summer bighorn sheep observations (orange dots); GPS-collared ewe #563 movements (yellow dots); current Grand Targhee Special Use Permit area (grey line); and proposed special use permit expansion areas (black lines).

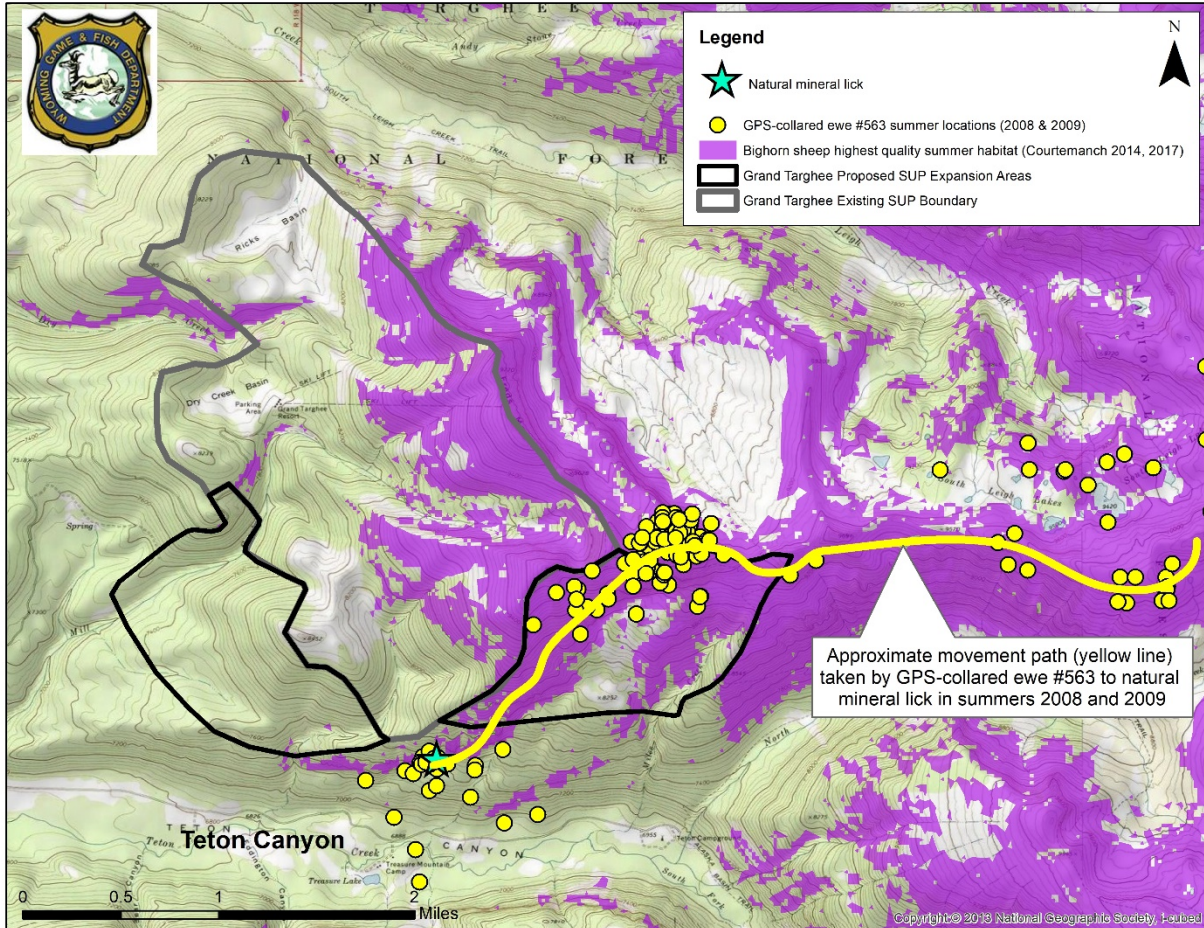


Figure 6. Targhee bighorn sheep summer habitat and approximate movement path of GPS-collared ewe to access Teton Canyon mineral lick. Targhee bighorn sheep summer habitat (purple) (from Courtemanch 2014 and Courtemanch et al. 2017); GPS-collared ewe #563 locations in summers 2008 and 2009 (yellow dots); approximate movement path to access mineral lick (yellow line); current Grand Targhee Special Use Permit boundary (grey line); and proposed special use permit expansion areas (black lines).

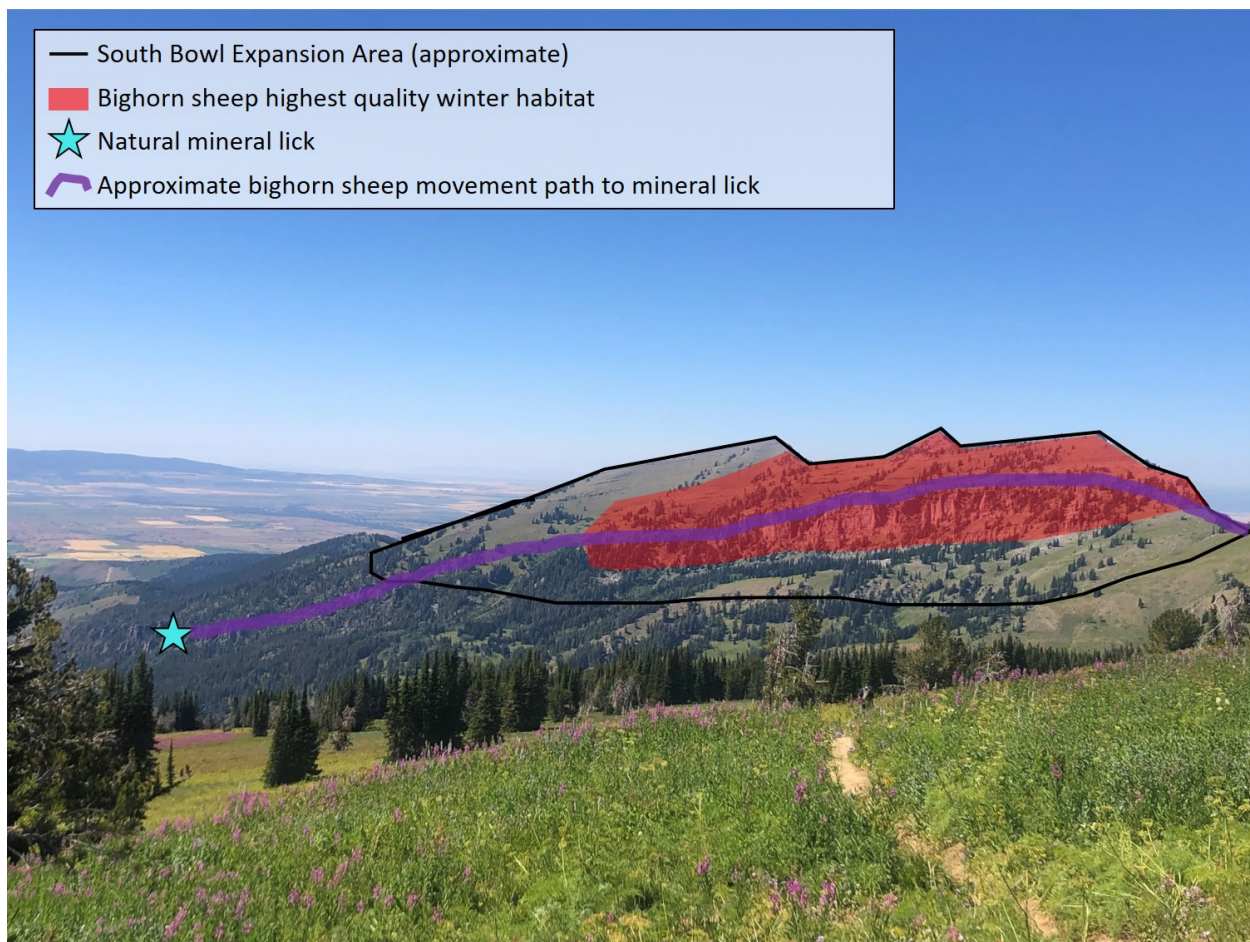


Figure 7. View of proposed South Bowl Special Use Permit expansion area (within black line) from Table Mountain Trail with Teton Canyon mineral lick (star); approximate bighorn sheep movement path to lick shown (purple line); and bighorn sheep highest quality winter habitat area (red).

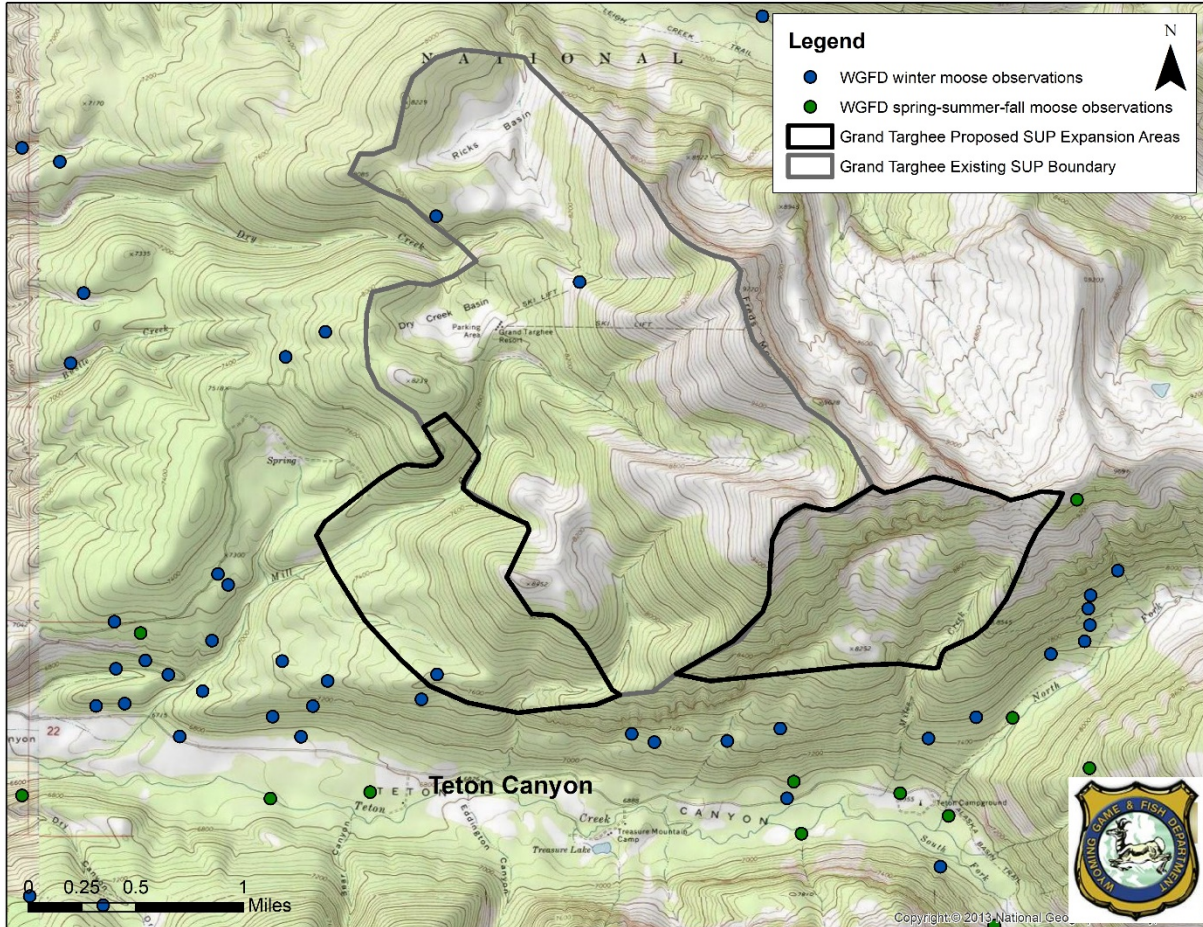


Figure 8. Moose winter (blue) and summer (green) observations in Teton Canyon and surrounding area from the Wyoming Game and Fish Department Wildlife Observation Database (1988-present). Current Grand Targhee Special Use Permit boundary (grey line) and proposed special use permit expansion areas (black lines).