



Wyoming Game and Fish Department

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June 20, 2025

WER 6312.05

United States Department of Agriculture

United States Forest Service

Grand Targhee 2018 Master Development Plan DEIS

Teton County

Jay Pence

District Ranger

United States Forest Service

1405 Hollipark Dr.

Idaho Falls, ID 83401

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Dear Mr. Pence,

The staff of the Wyoming Game and Fish Department (Department) has reviewed the proposed Grand Targhee 2018 Master Development Plan Draft Environmental Impact Statement (DEIS) and supporting documents. The Department is statutorily charged with managing and protecting all Wyoming wildlife (W.S. 23-1-103). Pursuant to our mission, we offer the following comments for your consideration.

The Department has been involved with the proposed project since requesting cooperating agency status in 2020. We appreciate the opportunity for involvement past, present, and future to ensure impacts to wildlife and wildlife habitat are avoided and minimized to the degree possible. The Department's long-standing relationship with the Caribou-Targhee National Forest (CTNF) and our ability to successfully work together to achieve the goals of the CTNF while minimizing impacts to wildlife.

Since our initial engagement, the Department's primary concern has been the impacts of expansion into the South Bowl area specifically on bighorn sheep habitat. Our comments during scoping and on the Biological Evaluation (BE) provided ample information on the fragility of the Targhee bighorn sheep herd and the potential for impacts with the expansion into the South Bowl. We appreciate the updates made to the BE that accurately reflect the Department's position and the CTNF's efforts to integrate data into the decision-making process. The Department made it clear in our initial engagement that we do not have comments or concerns related to any expanded use within the existing Special Use Permit area. Our focus remains on the proposed expansion areas.

Hunting Access – The Grand Targhee permit area and surrounding areas provide hunting opportunity, which is used primarily by deer, elk, and bear hunters. It is imperative that hunting access remain unhindered with whatever alternative is chosen moving forward.

Bighorn Sheep – A major concern remains the South Bowl proposed expansion's impact on the Targhee Bighorn Sheep Herd (also known as the Teton Range Herd), a small, isolated, non-migratory population of approximately 100 sheep. This herd, classified as a core, native herd in Wyoming, relies on limited wind-blown winter habitat at high elevations. However, the herd also utilizes mid-elevation habitats during winter periods with less snow and late winter/spring, which are found in Teton Canyon. This is the smallest of the four native herds in Wyoming and is disease free, primarily as a result of ample interagency efforts focused on minimizing exposure to domestic sheep interactions, removing overlapping mountain goats, and engaging in research, monitoring, and habitat improvement. The Teton Range Bighorn Sheep Working Group (TRBSWG), which is made up of representatives from the Department, National Park Service, U.S. Forest Service, and other local bighorn sheep experts, convened an expert panel in 2019 comprised of other bighorn sheep experts from around the western United States to review the status of the Targhee Bighorn Sheep Herd. As the BE states, this expert panel emphasized that prioritizing protection of remaining winter habitat, removing mountain goats, expanding habitat through restoration, and limiting human disturbance were paramount for the future sustainability of this herd (TRBSWG, 2020). These recommendations reinforce the Department's stance on the proposed Grand Targhee expansion into South Bowl.

Collaborative efforts and extensive public engagement by the TRBSWG have focused on balancing winter recreation with bighorn sheep habitat needs. Research clearly shows that winter recreation displaces bighorn sheep from crucial winter habitat (Kolek 2024, Courtemanch 2014), which is accurately acknowledged in the DEIS and BE. This research indicated that backcountry skiing activity does not appear to create a barrier to bighorn sheep movement through those areas, however, we expect that ski resort expansion, including chairlifts, constant human activity during the daytime, nighttime grooming operations, avalanche control noise, road activity, etc. would most likely prevent bighorn sheep from moving through this area. As a result, the Department is concerned that expanded ski resort development in South Bowl, would lead to unsustainable direct and indirect loss of the already limited winter habitat with impacts overflowing to adjacent areas and also creating a barrier to bighorn sheep movement farther down Teton Canyon to access a mineral lick and other occupied year-round habitat. From 2020-2021, the TRBSWG worked diligently with the backcountry skiing community to craft solutions and compromises to meet bighorn sheep habitat needs and winter recreation desires. These efforts culminated in a report which included recommendations for balancing bighorn sheep habitat and backcountry skiing in Teton Canyon (TRBSWG 2021). The recommendations included a winter closure of the South Bowl area and Apostles cliffs but retained two designated backcountry skiing routes through the area. The Department continues to stand by this recommendation which balances bighorn sheep habitat protection with maintaining backcountry skiing access in Teton Canyon.

The DEIS and BE provide population data from Department aerial surveys and a fecal DNA study conducted by the National Park Service (NPS), however there are important data updates from the past few years that should be included. The DEIS and BE state that the herd size is approximately

125 sheep. However a severe winter in 2022/2023 impacted the herd and numbers are now approximately 100 sheep. The Department conducted aerial surveys in February 2023 and February 2025 which counted 71 sheep and 80 sheep, respectively (WGFD 2023, WGFD *in prep*). The herd declined from an observed 104 sheep in 2022 to 71 sheep in 2023 over the severe winter (32% decline). The neighboring Jackson Bighorn Sheep Herd also underwent a similar population decline of approximately 30% during the 2022/2023 severe winter (WGFD 2023).

The BE also includes preliminary results from an NPS fecal DNA study to estimate the herd size. The BE accurately states that the preliminary results in 2022 estimated the herd size to be approximately 178 sheep. However, errors in the genotyping methodology were subsequently discovered and after they were corrected, the annual herd sizes were estimated to be the following: summer 2019 (122 +/- 26 (SE)), summer 2020 (121 +/- 7 (SE)) summer 2021 (118 +/- 12 (SE)), and summer 2022 (132 (+/- 6 (SE)) (NPS, *unpublished data*). The average estimated population size during the study was 123 sheep, therefore very close to our approximation of 125 sheep before the severe winter. Unfortunately, the study ended before the severe winter of 2022/2023. However, these data have helped determine the relative accuracy of the Department's annual aerial surveys. Winter aerial surveys during the same time periods detected 82% (February 2020), 74% (February 2021), and 88% (February 2022) of sheep compared to the fecal DNA population estimates before the severe winter. Therefore, on average the Department's aerial surveys are detecting approximately 81% of the sheep in the herd, which is within the range of previous research on bighorn sheep detection probability with aerial surveys (Bodie et al. 1995, Blum et al. 2024, Ruhl et al. 2025). The most recent survey in February 2025 counted 80 sheep, therefore using the 81% correction, our current population estimate is 99 sheep.

This herd is vulnerable to impacts from periodic, severe winters that occur in the Teton Range. Therefore, conserving what remains of their limited winter habitat is vital to their survival. Maintaining movement paths for sheep to access mid-elevation habitats such as in Teton Canyon is also vitally important in the winter and spring when sheep are at their lowest body condition and at their highest risk of mortality. In several places in the DEIS and BE, it is mentioned that there are 54 acres of modeled high quality bighorn sheep habitat in South Bowl, which would be impacted by expansion. This is true, however, there are also larger areas of occupied habitat and a mineral lick located down drainage in Teton Canyon that have well-documented, year-round sheep use and would be indirectly impacted by threatening the bighorn sheep movement path through South Bowl. This is taken into account when the BE estimates that 1,270 acres that are currently occupied by the Targhee Bighorn Sheep Herd (WGFD 2019) would be directly or indirectly impacted by the South Bowl expansion (pg. 31). Although this is only 0.8% of the herd's occupied range, it includes important winter and spring habitat with well-documented sheep use as well as contains a mineral lick. If access to the mineral lick is severed, alternative access routes are unlikely given the unsuitable habitat to the south. We agree with the BE where it states, "the small size and isolated nature of the Teton Range bighorn sheep population means that access to suitable habitat during difficult winter months, as well as during the summer fat gain, is vital to ensure that the population can persist" (pg. 23) and "the proposed South Bowl expansion combined with the general trend of increasing recreation activity throughout the range of the Teton bighorn sheep herd has the potential to result in a cumulative loss of habitat significant enough to potentially threaten population viability of the herd" (pg. 31).

While bighorn sheep have been well-documented using Teton Canyon for year-round habitat, significant vegetation succession has decreased the quality of habitat in the lower part of the canyon near the Apostles Cliffs. The Department, in collaboration with CTNF, has planned, funded, and begun implementing habitat improvement efforts as part of the Teton Canyon Hazardous Fuels Reduction Project. This project includes prescribed fire and mechanical treatments to reduce fuels and improve big game habitat, much of which is within or adjacent to the proposed South Bowl expansion. This habitat restoration effort is a rare opportunity given the prevalence of Wilderness Area and other special management areas where such treatments are not possible, however it would be jeopardized by the South Bowl expansion. We agree with the BE where it states “the proposed expansion under Alternatives 2 and 4...would significantly reduce or even completely nullify these habitat improvements for bighorn sheep” (pg. 30).

The DEIS describes how each alternative would impact population viability of Region 4 sensitive species within the “Targhee Planning Area”. For example, on pages 306-307 in the DEIS, “...degradation of habitat in South Bowl and Teton Canyon due to the proposed development, combined with projected increases in recreation activity throughout the range of the Teton bighorn sheep herd, has the potential to substantially reduce access to adequate nutrition and protective habitat. As a result, this alternative has the potential to result in an overall decline in the population of the Teton or Targhee Herd. Although the Proposed Action would impact the Teton Range bighorn sheep, across the overall Targhee Planning Area (which contains multiple herds), the alternative *May Impact Individuals or Their Habitat but would Not Likely Contribute to a Trend Toward Federal Listing or Cause a Loss of Population Viability*”. It is our understanding through discussions with CTNF staff the “Targhee Planning Area” is the CTNF although it is not explicitly defined in the BE or the DEIS.

For bighorn sheep, the DEIS and BE use outdated information from 2016 and 2017 to describe other bighorn sheep herds on CTNF. The BE states that there are 5 bighorn sheep herds on CTNF (South Lemhi, South Beaverhead, and Lionhead (2 herds) in Idaho and Targhee Herd in Wyoming) and that there are a total of approximately 300 sheep (BE; page 19). However, according to the most recent Idaho Department of Fish and Game Bighorn Sheep Management Plan (May 2022) the population estimates have changed in the last 8-9 years. The Lionhead Herd is made up of two game management units, however, this area is not consistently occupied by sheep and a few individuals only occur on a transient/foraging basis from a neighboring herd in Montana (IDF&G 2022; H. Miyasaki *pers. comm.*). The BE appears to include this herd and a population estimate of 105 sheep as part of its population viability analysis for the Targhee Planning Area, however this herd entirely resides in Montana outside of CTNF and it should not be included. The BE describes population numbers for the South Lemhi Herd as 41 and the South Beaverhead Herd as 36, however, the more recent counts from IDF&G (2022) are 110 and 17, respectively. Furthermore, the BE considers the entire Targhee Herd as residing on CTNF when referencing impacts at the Targhee Planning Area scale. Many sheep from the Targhee herd primarily reside in Grand Teton National Park, which is not within the Targhee Planning Area. Therefore, the Targhee Planning Area has 3 bighorn sheep herds and realistically fewer than 200 sheep (South Lemhi Herd, 110; South Beaverhead Herd, 17; and Targhee Herd, approximately 50 on CTNF) versus the 300 stated in the BE.

In addition, it is important to note that there is no connectivity between the herds in the Targhee Planning Area. The Targhee Herd is one of the few native bighorn sheep herds in the western United States that has never been extirpated, reintroduced, or augmented via translocation. The herd is genetically unique due to this history and is genetically distinct from surrounding herds in Wyoming and Idaho, making it additionally valuable to the species as a whole (Kardos et al. 2010, TRBSWG 2020). The Department disagrees with the determination that expanding into South Bowl would not impact the population viability of bighorn sheep in the Targhee Planning Area. The cumulative impacts portion of the BE rightfully identified the potential for cumulative impacts, which includes South Bowl expansion, to threaten the population viability of the Targhee herd. Given the significant contribution of the Targhee herd to the overall population of bighorn sheep within the Targhee Planning Area and the isolated nature of sheep in the Targhee Planning Area, loss of Targhee sheep population viability equates to loss of population viability of sheep in the Targhee Planning Area.

The southern edge of the proposed Mono Trees expansion area does not appear to follow any topographical features. It includes a small portion of south-facing slopes in Teton Canyon above and to the west of the Apostles Cliffs. It is unclear why this area is included and we request that the proposed boundary be adjusted to follow the topographic ridgeline, generally matching the northern edge of the Teton Canyon Hazardous Fuels Treatment areas and also avoiding WGFD mule deer crucial winter range (BE; Figure 17). As proposed, this small portion of the Mono Trees expansion area would also impact bighorn sheep by allowing development and activity directly above bighorn sheep occupied habitat in the Apostles Cliffs and into known foraging areas west of the cliffs (WGFD observation of 6 bighorn rams in this area on May 1, 2025). In addition, if the Mono Trees expansion area is approved, we request that CTNF prohibit Grand Targhee from conducting avalanche control activities within their permit boundary that purposely initiate avalanches which run outside of the permit boundary (which has become current practice in South Bowl). Initiating avalanches along the south side of the proposed Mono Trees expansion area could cause direct mortality to bighorn sheep, mule deer, elk, moose, and other wildlife in Teton Canyon outside of the permit boundary.

Overall, the proposed expansion to South Bowl will be detrimental to the long-term persistence of the Targhee Bighorn Sheep Herd. The Department recommends avoiding expansion into South Bowl to minimize additional and unnecessary threats and promote long-term persistence of bighorn sheep in the Teton Range.

Wolverines – The Department's second major concern with the proposed expansion is the potential for impacts to wolverines. In Wyoming, wolverines are a federally protected species and Tier II Species of Greatest Conservation Need due primarily to low population size, unknown population trajectory, and habitat loss due to climate change and human development. Wolverines have been documented in the area around Grand Targhee and, as mentioned in the Biological Assessment (BA), there have been a number of research and monitoring efforts in the Tetons. The research efforts have included collection of telemetry data and observations in our Wildlife Observation System database, which we present in Appendix A. The Department is concerned the loss of habitat provided in the BA does not accurately represent the subsequent impacts to

wolverine given the low densities in which they persist and the importance of all currently suitable habitat near the project area. The results of a DNA analysis in 2023 confirmed a minimum population size of 11 individuals in Wyoming (Pilgrim and Schwartz 2023). A loss of any one individual is, thus, significant. The potential for impact on future population stability is larger if the individual impacted is a breeding female.

The three primary research efforts that have occurred near Grand Targhee Resort were from papers cited in the BA, specifically Copeland et al. (2007) and Heinemeyer et al. (2019), and from an additional report and paper (Inman et al. 2013). The report is provided in Appendix B. The Inman et al. (2013) effort resulted in predicted maternal habitat, which includes the South Bowl and Mono Trees expansion areas (Appendix A). In addition, six collared wolverines' home ranges tracked for the Inman et al. (2013) study overlap Grand Targhee and the proposed expansion areas, of which four were females. Similarly, Heinemeyer et al. (2019) predicted female wolverine habitat, which includes much of Teton Canyon and overlaps a significant portion of the proposed South Bowl and Mono Trees expansion areas. It should also be noted that female wolverines have smaller home ranges than males, approximately 303 km² (Inman et al. 2013), which alters the percentage of the home range removed in the BA and should be considered in future drafts of the EIS. The tracking data, regularity of wolverine observations and wolverine sign make clear that the greater Grand Targhee area has been used by multiple generations of wolverines in the past and would likely continue to support wolverine into the future. The tracking data also suggest avoidance of the current resort boundary, a behavior that would likely extend to the expansion areas if developed.

Denning habitat is referenced in the BE and DEIS and the CTNF has a wolverine denning habitat predictive model, which was used in the assessment to quantify potential impact of the proposed activities. The BA also references a suspected den site discovered approximately 0.5 mile east of the proposed South Bowl expansion area. Wolverines require deep, persistent snowpack and undisturbed terrain for successful reproduction, as females create both natal dens and maternal dens, often several per reproductive year, in snow caves or rocky crevices where young can safely develop. The construction of ski runs, lifts, and associated infrastructure would eliminate these essential microhabitat features, while the ongoing human activity and avalanche control measures would create persistent disturbance that could prevent successful breeding or direct mortality. We agree with the determination in the BA (page 58) that expansion to South Bowl in particular may affect, likely to adversely affect individual wolverines. As mentioned earlier in our comments, the loss of one individual would negatively impact the wolverine population in the Teton Range specifically and Wyoming.

Beyond the immediate footprint of development, the expansion would fragment the broader landscape connectivity that wolverines require to maintain viable populations. Maintaining genetic diversity is essential to regional wolverine populations, which is only accomplished through maintaining functional habitat including forest cover and lack of human disturbance (Day et al. 2024). These wide-ranging carnivores need extensive territory to find adequate prey and mates, often traveling hundreds of miles across mountainous terrain. The increased human presence, noise, and infrastructure associated with expanded ski area operations would create barriers to wolverine movement and potentially isolate populations on either side of the development. Given

wolverines' already precarious status and their extreme sensitivity to habitat fragmentation, we are concerned that the loss of South Bowl and Mono Trees would negatively impact the long-term persistence of wolverines in the region.

In addition to concerns over habitat loss, fragmentation, and increased human disturbance, the Department requests clarification on the wolverine-specific Conservation Measure in the BA. Measure 20 under Wildlife and Fish Project Design Criteria references buffers being placed around active den sites if discovered during construction and operation. The Department requests additional detail on how dens would be located—whether opportunistically or through systematic methods—and on the proposed buffer sizes. Effective protective buffers would likely need to be substantial, and we question the practicality of implementing them successfully.

Forest Raptors – The Department agrees with the assessment that the Mono Trees expansion will affect forest-nesting hawks and owls given the detections of various SGCN raptors. We continue to recommend that the survey effort conducted to date be fully justified, as the data are now five years old and are being used to inform decisions on alternative selection and impact analysis. We recommend the following:

- Update survey effort in the South Bowl and Mono Trees expansion areas.
- Assess differences between two survey periods for changes and update EIS and supporting documents to accurately reflect current impact potential.
- If expansion into South Bowl or Mono Trees occurs, conduct additional clearance surveys and apply protections as described to all documented raptor nests.

The Department supports and appreciates the Best Management Practices integrated into the project development if expansions occur.

Prevent Establishment and Spread of Noxious Weeds and Invasive Annual Grasses – The Department appreciates the focus on preventing the establishment and spread of noxious weeds and invasive annual grasses (IAGs). Noxious weeds and IAGs can cause significant harm to the ecosystem when introduced. Ground-disturbing activities can create an environment that facilitates establishment by unwanted plants. They significantly reduce the quality of wildlife habitat and their presence increases the probability of catastrophic wildfire. The potential economic impacts to the State of Wyoming are severe, and once these species become established, eradication is difficult and costly. Prevention of establishment remains the best way to keep Wyoming's habitats free of noxious weeds and IAGs.

The Noxious Weed Risk Assessment (Risk Assessment) is overall sufficient and should decrease the probability of noxious weed and IAGs becoming problematic. The Department recommends in addition to the commitments outlined in the Risk Assessment, that trails be surveyed every year for consistency with other locations in the Early Detection and Rapid Response approach outlined under criteria number 9(c) in section 2. Noxious Weeds and IAGs can establish and spread quickly and the potential for that to occur on trails is equal to that in the other areas surveyed annually.

Jay Pence
June 20, 2025
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Thank you for the opportunity to comment. If you have any questions or concerns please contact Ross Crandall, Habitat Protection Biologist, at (307) 367-5615.

Sincerely,



Doug Brimeyer
Deputy Director

DB/rc

cc: U.S. Fish and Wildlife Service
Chris Wichmann, Wyoming Department of Agriculture

Literature Cited and Not Already In the DEIS/BA/BE

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Pilgrim, K. and M. Schwartz. 2023. DNA Analysis of Wolverine (*Gulo gulo*) Survey Samples Submitted by Wyoming Department of Game and Fish 2021-2022; Individual and Sex ID. 2 pp. (Attached)

Ruhl, C.Q., J.W. Cain III, F. Abadi, and J.D. Hennig. 2025. Estimating abundance of desert bighorn sheep with double-observer sightability modeling with residual heterogeneity. *Journal of Wildlife Management*. e70050.

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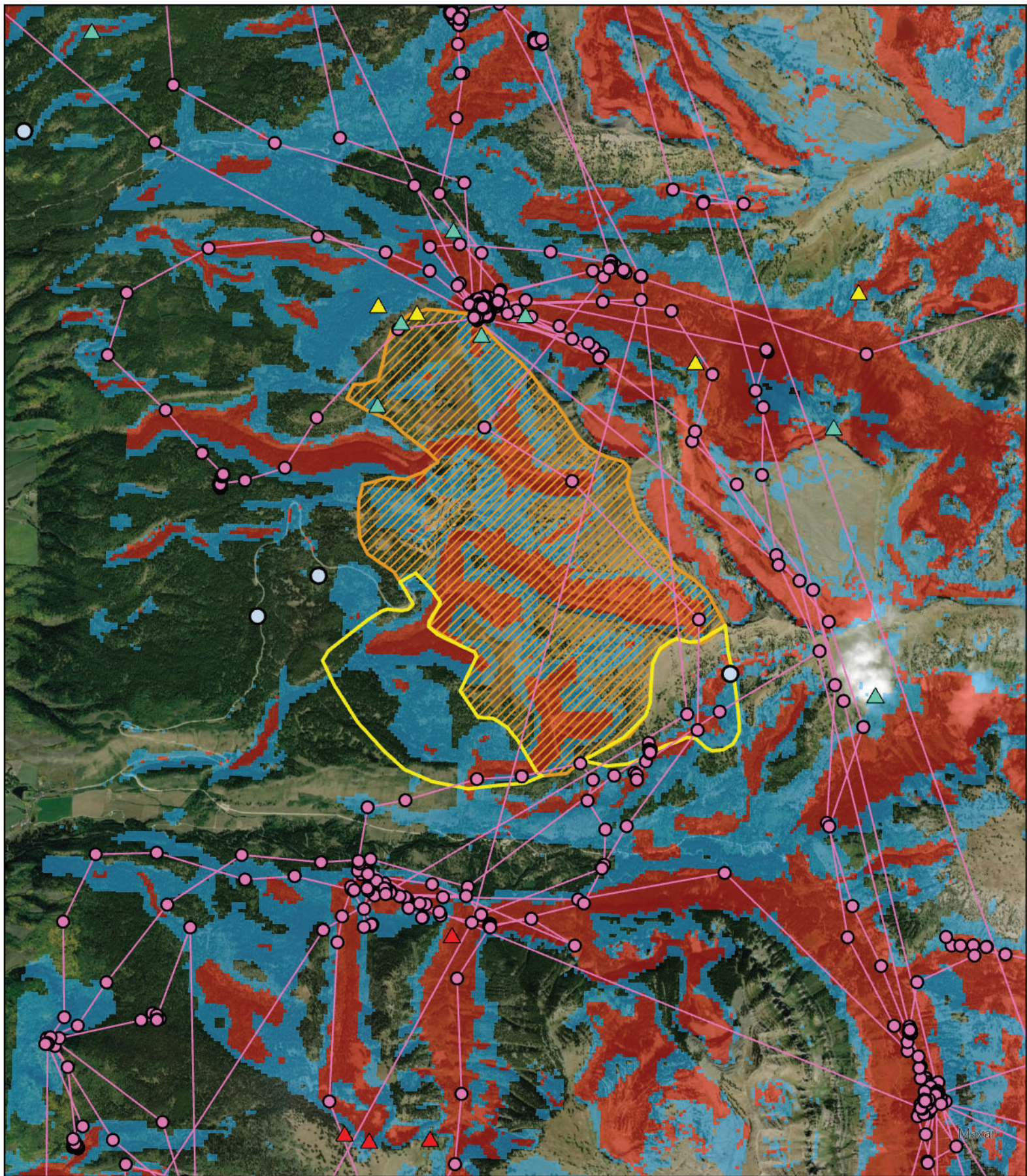
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Appendix A. Maps of wolverine habitat, home range estimates, observations, and collar locations relative to the proposed actions.



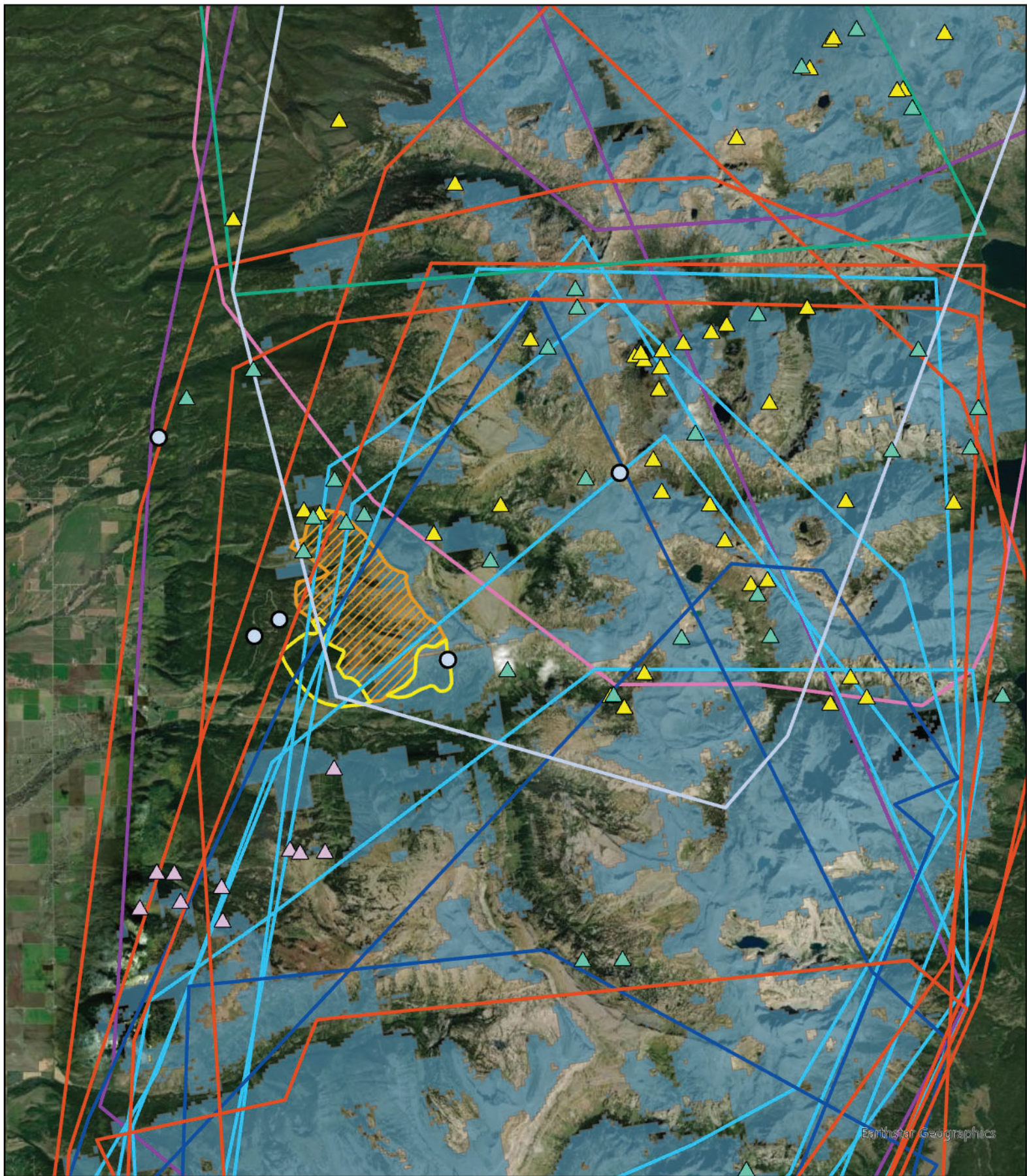
Legend

- | | | | |
|---|---|--|---|
| <p>● GPS-tagged wolverine movements (n=1) (2014-2015) (K. Heinemeyer)</p> <p>○ WGFD WOS confirmed wolverine records (2009-2025)</p> | <p>VHF-tagged wolverines (n=3) relocations, 1998-2000 (J. Copeland)</p> <p>▲ F402</p> <p>▲ F468</p> <p>▲ M399</p> | <p>Female wolverines predicted potential habitat (K. Heinemeyer et al. 2019)</p> <p>■ Moderate</p> <p>■ High</p> | <p>▨ Grand Targhee current boundary</p> <p>■ Grand Targhee proposed expansion areas</p> |
|---|---|--|---|

0 0.5 1 Miles

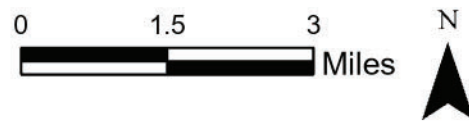


Map produced by Wyoming Game and Fish Department, June 2025, with data from J. Copeland, K. Heinemeyer, and WGFD



Legend

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|--|--|--|--|
| <ul style="list-style-type: none"> WGFD WOS confirmed wolverine records (2009-2025) Predicted maternal wolverine habitat (Inman et al. 2013) | <ul style="list-style-type: none"> VHF-tagged wolverines (n=3) relocations, 1998-2000 (J. Copeland) F402 F468 M399 | <ul style="list-style-type: none"> Wolverines annual 100% minimum convex polygons (n=7) (2001-2006) (Inman et al. 2013) F401 F402 F404 F405 M301 | <ul style="list-style-type: none"> M304 M561 Grand Targhee current boundary Grand Targhee proposed expansion areas |
|--|--|--|--|



Map produced by Wyoming Game and Fish Department, June 2025, with data from B. Inman, J. Copeland, and WGFD

Appendix B. Wolverine genetics report confirming a minimum population size of 11 individuals in Wyoming.



REPORT



Project: DNA Analysis of Wolverine (*Gulo gulo*) Survey Samples Submitted by Wyoming Department of Game and Fish 2021-2022; Individual and Sex ID

Date Issued: August 18, 2023

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REPORT



We tested 39 non-invasively collected samples identified as being from wolverine for individual and sex identification. We also tested DNA obtained from hair provided from a female captured wolverine (WY152305) from collaring efforts. These samples were analyzed using a panel of microsatellite loci and a sexing locus used previously in wolverine. Twenty-two of the 39 samples had sufficient DNA to produce an individual genotype (56%; Table 1). In addition, four samples had more than two alleles at multiple loci indicating more than one individual wolverine (“mixed individual”) and one sample had alleles both from wolverine and marten (“mixed with marten”). We obtained quality DNA from female WY152305 for analysis. Ten individuals were identified from the non-invasive survey samples (Table 1). Data from these 11 individuals as well as WY152305 were compared to the four wolverines identified from 2016 and 2017 multi-state wolverine survey samples, as well as other regional wolverines. The 10 individuals identified from non-invasive samples (six females and four males) and female WY152305 are all new individuals to the DNA database (Table 2).

Table 1. DNA individual and sex identification results from wolverine identified from samples submitted from WYGF 2021-2022 wolverine surveys.

Sample ID	Cell	Study Area	Lat	Long	Date Collected	Shipment	DNA Species ID	DNA Individual ID	DNA Sex ID	Recapture
C116.2021.12.08.V1.B2	116	Huckleberry Ridge	44.10373	-110.61491	12/8/2021	1	Wolverine	poor DNA	poor DNA	
C033.2021.12.06.V1.B3	33	Boulder Creek	43.15917	-109.90971	12/6/2021	1	Wolverine	WY22_Gulo-F1	Female	No
C032.2021.12.02.V1.B3	32	Kilgore Creek	43.08338	-110.53865	12/2/2021	1	Wolverine	poor DNA	poor DNA	
C161.2021.12.05.v1.B1	161	Blackwater Creek	44.38130	-109.76380	12/5/2021	2	Wolverine	poor DNA	poor DNA	
C161.2022.01.11.v2.B1	161	Blackwater Creek	44.38130	-109.76380	1/11/2022	2	Wolverine	poor DNA	poor DNA	
C161.2022.01.11.v2.B2	161	Blackwater Creek	44.38130	-109.76380	1/11/2022	2	Wolverine	poor DNA	poor DNA	
C087.2021.12.09.v1.B1	87	Triple East Fork	43.76470	-109.30214	12/9/2021	2	Wolverine	poor DNA	poor DNA	
C087.2021.12.09.v1.B3	87	Triple East Fork	43.76470	-109.30214	12/9/2021	2	Wolverine	WY22_Gulo-M2	Male	No
C087.2021.12.09.v1.B4	87	Triple East Fork	43.76470	-109.30214	12/9/2021	2	Wolverine	WY22_Gulo-M2	Male	No
C267.2022.01.12.v2.B1	267	Sheepherder Lake	44.96702	-109.51216	1/12/2022	2	Wolverine	WY22_Gulo-F3	Female	No
C267.2022.01.12.v2.B3	267	Sheepherder Lake	44.96702	-109.51216	1/12/2022	2	Wolverine	WY22_Gulo-F3	Female	No
C267.2022.01.12.v2.B4	267	Sheepherder Lake	44.96702	-109.51216	1/12/2022	2	Wolverine	WY22_Gulo-F3	Female	No
C116.2022.01.20.v2.B1	116	Huckleberry Ridge	44.10373	-110.61491	1/20/2022	3	Wolverine	multiple individuals		
C116.2022.01.20.v2.B2	116	Huckleberry Ridge	44.10373	-110.61491	1/20/2022	3	Wolverine	multiple individuals		
C116.2022.01.20.v2.B3	116	Huckleberry Ridge	44.10373	-110.61491	1/20/2022	3	Wolverine	multiple individuals		
C116.2022.01.20.v2.B4	116	Huckleberry Ridge	44.10373	-110.61491	1/20/2022	3	Wolverine	multiple individuals		
C043.2022.01.19.v2.B1	43	Slide Creek	43.28251	-109.80036	1/19/2022	3	Wolverine	WY22_Gulo-M4	Male	No
C043.2022.01.19.v2.B3	43	Slide Creek	43.28251	-109.80036	1/19/2022	3	Wolverine	poor DNA	poor DNA	
C085.2022.02.03.Scat1	85	Five Pockets	43.76525	-109.66595	2/3/2022	4	Wolverine	poor DNA	poor DNA	
C085.2022.02.03.Scat2	85	Five Pockets	43.76141	-109.66586	2/3/2022	4	Wolverine	WY22_Gulo-F5	Female	No
C033.2022.02.16.v3.B1	33	Boulder Creek	43.15917	-109.90971	2/16/2022	5	Wolverine	WY22_Gulo-M4	Male	No



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C116.2022.02.22.v3.B1	116	Huckleberry Ridge	44.10373	-110.61491	2/22/2022	5	Wolverine	poor DNA	poor DNA	
C043.2022.02.17.v3.B1	43	Slide Creek	43.28251	-109.80036	2/17/2022	5	Wolverine	WY22_Gulo-M4	Male	No
C043.2022.02.17.v3.B3	43	Slide Creek	43.28251	-109.80036	2/17/2022	5	Wolverine	WY22_Gulo-M4	Male	No
C161.2022.02.15.v3.B1	161	Blackwater Creek	44.38130	-109.76380	2/15/2022	6	Wolverine	WY22_Gulo-F6	Female	No
C161.2022.02.15.v3.B3	161	Blackwater Creek	44.38130	-109.76380	2/15/2022	6	Wolverine	WY22_Gulo-F6	Female	No
C101.2022.03.03.v3.B1	101	Divide Lake	43.93361	-110.24067	3/3/2022	6	Wolverine	poor DNA	poor DNA	
C101.2022.03.03.v3.B4	101	Divide Lake	43.93361	-110.24067	3/3/2022	6	Wolverine	WY22_Gulo-M7	Male	No
C245.2022.04.06.pull.B1	245	Pilot Creek	44.94605	-109.90605	4/6/2022	7	Wolverine	WY22_Gulo-M8	Male	No
C245.2022.04.06.pull.B3	245	Pilot Creek	44.94605	-109.90605	4/6/2022	7	Wolverine	mixed with marten		
C161.2022.04.07.pull.B1	161	Blackwater Creek	44.38130	-109.76380	4/7/2022	7	Wolverine	WY22_Gulo-F6	Female	No
C161.2022.04.07.pull.B3	161	Blackwater Creek	44.38130	-109.76380	4/7/2022	7	Wolverine	WY22_Gulo-F6	Female	No
C085.2022.04.15.pull.B1	85	5 Pockets	43.80013	-109.70362	4/15/2022	8	Wolverine	WY22_Gulo-F9	Female	No
C085.2022.04.15.pull.B2	85	5 Pockets	43.80013	-109.70362	4/15/2022	8	Wolverine	WY22_Gulo-F9	Female	No
C116.2022.04.07.v5.B1	116	Huckleberry Ridge	44.10373	-110.61491	4/7/2022	8	Wolverine	WY22_Gulo-F10	Female	No
C116.2022.04.07.v5.B3	116	Huckleberry Ridge	44.10373	-110.61491	4/7/2022	8	Wolverine	WY22_Gulo-F10	Female	No
C116.2022.04.07.v5.B4	116	Huckleberry Ridge	44.10373	-110.61491	4/7/2022	8	Wolverine	poor DNA	poor DNA	
C033.2022.03.18.SCAT1	33	Boulder Creek	43.16381	-109.90874	3/18/2022	8	Wolverine	WY22_Gulo-M4	Male	No
C033.2022.03.18.SCAT2	33	Boulder Creek	43.15917	-109.90971	3/18/2022	8	Wolverine	poor DNA	poor DNA	

Table 2. DNA individual and sex identification results from a female wolverine capture by WYGF 2023.

Sample Type	Lab-ID	Location	Lat	Long	Date Collected	Collector	Sex	DNA Individual ID	Recapture
Hair from Capture	WY-152305	Boulder Basin	44.11879	-109.5674	3/11/2023	Heather O'Brien	Female	WY-152305	No

Please let us know if you have any questions; we look forward to working with you in the future.