



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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In Reply Refer To:
FWS/R1/ES/IFWO/2025-0055116

Christopher Savage, RRM Director
USDA Forest Service, Northern Region
26 Fort Missoula Road
Missoula, Montana 59804

Subject: Programmatic Biological Assessment for Activities that are Not Likely to Adversely Affect Wolverine in Idaho –Idaho Panhandle, Nez Perce-Clearwater, Payette, Salmon-Challis, Caribou-Targhee, Boise, and Sawtooth National Forests, Idaho – Concurrence

Dear Christopher Savage:

This letter responds to the National Forests in Idaho within Regions 1 and 4 of the U.S. Forest Service (hereafter referred to as Forest Service) requests for the U.S. Fish and Wildlife Service's (Service) concurrence on effects of the subject action to species and habitats listed under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.; [Act]). The Forest Service's request dated December 16, 2024 (i.e., received by the Service on December 17, 2024, and accepted as final on February 4, 2025), included a biological assessment entitled *Programmatic Biological Assessment for Activities that are Not Likely to Adversely Affect Wolverine in Idaho* (Assessment) dated December 13, 2024. Information contained in the Assessment is incorporated here by reference.

Through the Assessment, the Forest Service determined that the proposed action may affect but is not likely to adversely affect North American wolverine (*Gulo gulo luscus*). The Service concurs with the Forest Service's determination for wolverines and presents our rationale below.

Proposed Action

The action area includes the Boise, Caribou-Targhee, Idaho Panhandle, Nez Perce-Clearwater, Payette, Salmon-Challis, and Sawtooth National Forests. The proposed action includes activities that are consistent with the screening criteria outlined in the Assessment (Appendix A, pp. 18-23). These criteria ensure that proposed activities are designed so that potential effects would be insignificant or discountable, therefore, resulting in a not likely to adversely affect determination for wolverines. Proposed actions that are covered by the Assessment and this letter of concurrence include activities permitted by the Forest Service that would increase human presence or human-related activity including:

- vegetation management (i.e. forest regeneration, commercial, and precommercial thinning; fuel reduction; hazard tree removal; prescribed burning; individual tree daylighting; aspen enhancement; and insect and disease treatment)
- pest control,

PACIFIC REGION 1

IDAHO, OREGON*, WASHINGTON,
AMERICAN SAMOA, GUAM, HAWAII, NORTHERN MARIANA ISLANDS

*PARTIAL

- blasting and mineral extraction,
- monitoring, survey, and research,
- road and trail construction, modification, or access changes,
- dispersed and developed recreation sites,
- aircraft, and
- permitted special uses.

Proposed Actions that are consistent with the screening process (Screen) are described in Appendix A of the Assessment (pp. 18-23). The proposed action does not include any actions that might result in adverse effects to wolverines (Assessment, p. 3). All potential effects associated with implementing the proposed action in the Assessment must be considered when using the Screen. If a future proposed action is not fully consistent with the Screen, or if ambiguity surrounds the future proposed action, then a separate process should be considered for section 7 compliance under the Act. When proposed actions are consistent with the Screen, the Forest Service will complete the summary sheet (Appendix B, Assessment pp. 24-25). If a proposed action requires section 7 consultation for other species but meets the criteria in the Screen for wolverines, a summary sheet will be attached to the consultation for other species. The documentation of the screening process and determination of effects for compliance with Section 7 consultation must be conducted or reviewed by a Forest Service biologist that are journey-level or higher (FSM 2634.03, Assessment, p. 3).

The Service will review all submitted Screens worksheets until a Determination Key (DKey) is in place. The Service will notify the Forest Service through a level 1 meeting or within 15 calendar days if we determine that the proposed Action does not meet the criteria for a “may affect, not likely to adversely affect” (NLAA) determination.

Proposed conservation measures are intended to minimize effects to wolverine. Conservation measures are found in the Assessment (p. 4). The proposed action is fully described in the Assessment and Appendix A (pp. 3-4, 18-23).

Species and Habitat Presence

North American Wolverine

The action area is part of the Central Linkage and Salmon-Selway Regions (Inman et al. 2013, pp. 281-282). These areas are identified as crucial for ensuring wolverine population survival and connectivity between the Northern U.S. Rockies and Canada.

The different habitat models for wolverines in the Western U.S. include:

1. **Inman et al. (2013)**: This model identifies four habitat layers—maternal, primary, female dispersal, and male dispersal—highlighting the importance of maternal habitat for reproductive success and lower densities of roads in primary habitats.
2. **Copeland et al. (2010)**: This model focuses on the association of wolverines with persistent spring snow cover, indicating its critical role for reproductive success by mapping areas with adequate snow over several years.

3. **Carroll et al. (2020):** This model examines habitat requirements for dispersing wolverines and connectivity, identifying high to medium connectivity value areas that align closely with those of Inman's primary and female dispersal habitats.

Together, these models underscore the significance of snow conditions for wolverine reproduction and survival, while also highlighting the essential need for connectivity between habitats.

The Forest Service manages 45,217,891 acres of the current distribution of breeding populations as defined by Inman *et al.* (Inman et al. 2013, p. 282; USFWS 2018, p. 151). The National Forests in Idaho that are covered in the Assessment manage 21,041,848 acres of wolverine habitat, including 7,695,504 acres and 3,309,499 acres of modeled primary and maternal habitats, respectively (Table 1). Across the National Forests in Idaho, modeled wolverine maternal/denning¹ and primary² habitats are mostly at higher elevations and have relatively low road densities. In contrast, dispersal habitat³ is found at lower elevation areas with higher levels of human access. Dispersal habitat generally lies between primary and maternal/denning habitat, and wolverines use it to move between patches of suitable high elevation habitat or for other exploratory movements. Dispersal habitat in this area generally is not suitable for the establishment of wolverine home ranges and reproduction (Assessment, p. 9).

The distribution of wolverines in Idaho has remained largely consistent since the 2018 Species Status Assessment (USFWS 2023, p. 8). Statewide occupancy results from 2021–2022 show similar detection rates to 2016–2017. New data has been collected at finer scales, with key findings summarized as follows (USFWS 2023, pp. 8-9):

Payette National Forest: A 2020–2021 survey using camera-traps and deoxyribonucleic acid (DNA) found a decrease in wolverine presence. The number dropped from 9 in 2011 to 4 in 2021. This decline continues to show a loss of resident wolverines that was noted in 2010 and 2011 to 2014. These findings suggest that what was once considered a stable population may be more unstable. In 2024, a new Central Idaho Wolverine and Winter Recreation Research and Monitoring Project (CIWP) began that includes the Payette National Forest. The project uses remote camera and DNA sampling techniques, and preliminary results have detected wolverines at 2 of the 12 sampling sites (Wilkins 2025, p. 5).

¹ Habitat generally characterized by areas that maintain late spring snowpack (typically through April-May), although other variables are likely important such as habitat structure (e.g. uprooted trees, boulders, and talus fields), topographic structure, and elevation (Assessment, p. 17). *Synonymous with Denning Habitat.*

² Areas suitable for long-term survival by resident adults (Assessment, p. 17).

³ Areas of low-quality habitat, generally in lower elevations, that wolverine may move through between patches of core habitat.

Dispersal habitat may include habitat facilitating travel across both short distances (within home ranges) and long distances (between home ranges).

Females tend to establish home ranges near their natal ranges, thus modeled wolverine dispersal habitat used for project-level analysis is male-biased (Assessment, p. 16).

Boise National Forest: Surveys in central Idaho showed a stable wolverine population, with 7 (likely 8) individuals detected across 14 camera stations using a combination of DNA and photographs. This included the identification of a new male wolverine. As part of the CIWP, preliminary results have detected wolverines at 1 of the 11 sampling sites (Wilkins 2025, pp. 5-6).

Sawtooth National Forest: Wolverines occur on the Sawtooth National Forest at low densities with documented denning activity (Heinemeyer and Squires 2013, p. 9). Preliminary results of the CIWP have detected wolverines at 2 of the 18 sampling sites (Wilkins 2025, p. 5).

Lemhi and Lost River Mountains: Prior to survey efforts in 2017–2018, there were no records of a female wolverine in the Lemhi range and there were a few records of wolverines from the Lost River range. Although the survey effort in the winter of 2017-2018 was only a systematic survey, a female wolverine was detected in the Lost River range, and wolverine activity at this location was documented several times that year. It was not determined if this female was a resident or not, but the study concluded that only a small number of wolverines (one male and one female) could maintain territories in the two ranges.

Caribou Targhee National Forest: Surveys from 2019–2020 detected wolverines in the Magic Valley and Southeast regions, but no wolverines were found in the Upper Snake region.

Idaho Panhandle and Nez Perce-Clearwater National Forests: Multispecies Mesocarnivore Monitoring began in 2017, which uses snow-track surveys, eDNA analysis, and baited camera stations for monitoring (Golding et al. 2018, p. 31). Forests are surveyed on a three-year rotation. The Idaho Panhandle was surveyed during the winters of 2018-2019 and 2021-2022 and the Nez Perce-Clearwater was surveyed during the winters of 2017-2018 and 2020-2021. Wolverines were not detected during any of these surveys.

Wilderness and Idaho Roadless Rule

Approximately 96 percent of modeled wolverine primary habitat (Inman et al. 2013, entire) in the contiguous United States is located on Federal lands, with 41 percent of this habitat located in designated wilderness areas (USFWS 2018, p. 103). In Idaho, there are 3,665,862 total acres of wolverine habitat within Forest Service wilderness areas, of which 2,240,060 acres and 904,323 acres are modeled primary and maternal habitat respectively (Table 1).

The Idaho Roadless Rule designates a system of lands titled Idaho Roadless Areas and would establish five management themes for individual roadless areas. The Idaho Roadless Rule areas allow motorized travel on existing roads and trails, but it reduces or prevents infrastructure development by restricting mining, prohibiting road building and reconstruction, and constraining timber harvest (U.S. Forest Service 2008, pp. 1-2).

Table 1. Modeled wolverine potential habitat (Inman et al. 2013) within wilderness areas in Region 1 and 4 of Idaho National Forests covered in the Assessment. Habitats overlap and acreages are not additive (i.e. dispersal encompasses primary and maternal, and primary encompasses maternal).

Spatial Scale	Maternal	Primary	Dispersal
State of Idaho	3,431,774	8,201,377	44,419,657
National Forests (Forest Service Regions 1 and 4 in Idaho)	3,309,499	7,695,504	21,041,848
Forest Service Wilderness areas (Forest Service Regions 1 and 4 in Idaho)	904,323	2,240,069	3,665,862

Potential Impacts and Effects from the Proposed Action

North American Wolverine

The proposed action has the potential to affect wolverines through habitat alteration, prey availability, noise, vehicle collisions, and pest control. The Assessment (Appendix A, pp. 18-23) displays a flowchart and tables with specific actions, activity components, and the respective screening criteria. The proposed action must meet the following criteria to have insignificant or discountable effects to wolverines:

- Proposed actions *would not* increase potential for collision mortality or injury of wolverines as paving roads or constructing paved roads in mapped maternal/denning, primary or dispersal habitat is not part of this action.
- Proposed actions *would not* increase the intensity, duration, or spatial extent of winter or spring (1/15 to 5/15) human-related access or use in modeled maternal/denning or primary habitat over existing levels.

Habitat Alteration

The Assessment covers actions that could remove or impair habitat structures that are important to wolverines for breeding, feeding, and sheltering, including talus features; large, downed logs; and root wads; deep snow lasting through May 15th; and vegetative cover. Common activities that are most likely to remove these habitat features include (1) regeneration, commercial, and precommercial thinning, (2) fuel reduction, (3) hazard tree removal, (4) prescribed burning, (5) individual tree daylighting, (6) aspen enhancement, (7) insect and disease treatment, (8) dispersed and developed recreation sites, (9) helicopter pads, (10) blasting and mineral extraction, (11) road and trail construction, modification, or access changes, and (12) permitted special uses. Wolverines often use deep snow for dens, rendezvous sites, and food caches that extend down into rock or talus features or under logs and root wads for dry, insulated, and secure cavities (Aronsson 2017, p. 46; USFWS 2018, pp. 26, 28, 34-35, 43). Proposed activities could compact snow and collapse potential dens and tunnels and destroy food caches. The destruction of these features during the denning season could reduce reproductive success of females or cause the death of females or kits. Open areas created by removing vegetation may deter wolverine movement or cause wolverines to search for alternative dispersal routes. Wolverines do not prefer any specific type of vegetation; instead, they select areas with varied density and vertical structure that offer microhabitat features, providing cold and dark environments (van der Veen 2017, p. 15), suggesting vegetation modification will have minimal effects to individuals.

Additionally, some vegetation management could benefit wolverines by creating or maintaining forest edges and promoting diverse habitats (Assessment, pp. 10-11). To minimize effects on denning and foraging wolverines, activities would occur outside of the denning season (January 15 to May 15) in modeled maternal/denning and primary habitat. Large logs and root wads would be retained intact especially in primary and maternal/denning habitat, unless cutting or removal is needed for human health and safety (Assessment, p. 10). Screening criteria in Table A (Assessment Appendix A, pp. 20-21) and all actions that are proposed in maternal/denning or primary habitat must be consistent with Table B (Assessment Appendix B, pp. 22-23) will minimize or prevent impacts from activities on talus features; large, downed logs; and root wads; and vegetative cover, ensuring they do not interfere with denning wolverines. Proposed actions will also not increase winter or spring human-related access or use in maternal/denning or primary wolverine habitat. Therefore, habitat alteration activities will have insignificant effects on wolverines in modeled maternal/denning and primary habitat and discountable effects in dispersal habitat because denning is unlikely to occur.

Prey Availability

Proposed actions in the Assessment may temporarily alter the distribution of prey species, such as causing big game to avoid areas where proposed actions are being implemented. However, available prey resources would not be expected to change appreciably at the scale of a wolverine's home range. Displacing prey and preventing wolverines from accessing carrion may reduce foraging opportunities or increase the amount of time and energy wolverines spend foraging. However, these changes are expected to be short-term and localized. Wolverine are highly mobile and habitat that is in designated wilderness and Idaho Roadless Rule Areas will be available for wolverines and their prey during the implementation of proposed actions. Additionally, activities will be completed outside of the denning season in denning/maternal habitat, so denning wolverines will retain access to food caches. Vegetation management would improve foraging conditions for big game and other prey species by increasing understory species such as grasses and forbs and enhancing aspen stands. Improvements in the quality and quantity of forage resources are likely to improve the health of big game herds, which is expected to aid in maintaining a sustainable prey base for wolverines (Assessment, p. 10). Proposed actions that are consistent with all relevant aspects of Table A (Assessment Appendix A, pp. 20-21) and Table B (Assessment Appendix B, pp. 22-23) would minimize impacts on prey populations and benefit prey species for the long-term. Wolverine are expected to adjust to these temporary shifts in prey distribution; therefore, effects to wolverine prey will be discountable.

Noise

Noise associated with all proposed actions covered in the Assessment may disrupt wolverines and cause them to search for alternative dispersal routes or prey resources. Wolverine are highly mobile, and designated wilderness and Idaho Roadless Rule Areas are available for wolverines to use during implementation of proposed actions. Recreation-related proposed actions include the use, development, and maintenance of sites such as (1) campgrounds and rental cabins, (2) interpretive signs, (3) parking areas, (4) trailheads, (5) fire lookouts, and (6) other agency administrative sites (Assessment, Appendix A, Table B, p. 23). All these activities could disrupt dispersing wolverines or modify the behavior of reproductive wolverines. This disturbance and increased movement may cause an increase in energy expenditure. Any disruption to wolverine

dispersal will occur over a short-term and at a relatively small scale compared to the size of wolverine's home range. Proposed actions will not increase winter or spring human-related access or use in maternal/denning or primary wolverine habitat and no new sites will be developed for winter or spring use (during the breeding season window of January 15 to May 15). Proposed actions will be consistent with all relevant aspects of Table A (Assessment Appendix A, pp. 20-21) and Table B (Assessment Appendix B, pp. 22-23). Therefore, the effects of noise to wolverines will be insignificant.

Vehicle Collisions

Proposed actions include the construction, rerouting, and maintenance of permanent and temporary roads and trails and modifications to the existing allowed motorized access routes or cross-country travel. However, the proposed action excludes the above activities and will not increase winter or spring human-related access or use within modeled maternal/denning and primary habitat (Assessment, Appendix A, pp. 19-22). Road paving in all wolverine habitat is also excluded (Assessment p. 4). Vehicle speeds on Forest Service managed roads are usually slow due to topography and road conditions. Slower speeds increase the chance a wolverine would be seen by a driver and increase the chance a wolverine would have time to move out of the way of the vehicle. Therefore, the proposed action is not expected to increase the mortality or injury of wolverines through vehicle collisions. Furthermore, proposed actions will be consistent with all relevant aspects of Table A (Assessment Appendix A, pp. 20-21) and Table B (Assessment Appendix B, pp. 22-23). Therefore, effects from increased wolverine-vehicle collisions are expected to be discountable.

Pest Control

Strychnine is used as pest control method in the Assessment, which is used to control pocket gopher populations and has the potential to expose wolverines to toxic chemicals. Secondary poisoning may occur if wolverines consume pocket gophers or non-target species that have ingested strychnine-treated grain. Strychnine poisoning in humans has been observed to cause respiratory failure and death (Borges et al. 1989, Section 9.3). Pocket gophers poisoned by strychnine will likely die underground, further reducing the likelihood of secondary poisoning (Ramey et al. 2002, p. 142). In addition to secondary poisoning, strychnine use will affect wolverines by reducing their prey base. Pocket gopher populations will decrease when the Forest Service applies strychnine, which will reduce wolverine foraging opportunities. However, untreated areas will continue to offer foraging opportunities for resident and dispersing wolverines. Screening criteria will reduce the likelihood of poisoning non-target species and will help retain wolverine prey base. Screening criteria include: (1) strictly following label instructions, using the minimum amount needed but no more than 1.0 pound per acre in rows at least 10 feet apart and consisting of no more than one teaspoon per bait per burrow, (2) bait applying only where gopher activity has been documented, (3) applying bait no more than once per year, and (4) applying bait only during the dry season when soil moisture is moderate to low and when heavy precipitation is unlikely (Assessment, Appendix A, p. 21). Due to the screening criteria and the availability of untreated areas, the effects from pest control use to foraging wolverines is expected to be insignificant.

Concurrence

Based on the Service's review of the Assessment, we concur with the Forest Service's determination that the actions outlined in the Assessment and this letter, may affect, but is not likely to adversely affect North American wolverine. This concurrence is based on screening criteria in Appendix A of the Assessment (pp. 18-23). Additionally, the availability of designated wilderness and Idaho Roadless Rule Areas provide habitat refugia. Combined, screening and habitat refugia reduce impacts of the proposed actions to wolverines to insignificant or discountable levels.

This concludes informal consultation. Further consultation pursuant to section 7(a)(2) of the Act is not required. Reinitiation of consultation on this action may be necessary if: (1) new information reveals effects of the action that may affect listed species or designated critical habitat in a manner or to an extent not considered in the Assessment, (2) the action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in the analysis, or (3) a new species is listed or critical habitat designated that may be affected by the proposed action.

Thank you for your continued interest in the conservation of threatened and endangered species. If you have any questions regarding this consultation, please contact Cassandra Hagemann of this office at (208) 433-5057 or Cassandra_hagemann@fws.gov.

Sincerely,

for Lisa Ellis
State Supervisor

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