

**GALLATIN WILDLIFE
ASSOCIATION**

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Subject: Bighorn Sheep Habitat Management Standards and Species of Conservation Concern

Dear: Leanne

The Gallatin Wildlife Association is a non-profit volunteer wildlife conservation organization made up of dedicated hunters, anglers and other wildlife advocates in Southwest Montana and elsewhere. Our mission is to protect habitat and conserve fish and wildlife for this and future generations. We support sustainable management of fish and wildlife populations through fair chase public hunting and fishing opportunities that will ensure these traditions are passed on for future generations to enjoy. We also support the Montana constitution which states: “the opportunity to harvest wild game is a heritage that shall forever be preserved” and that “the legislature shall provide adequate remedies to prevent unreasonable depletion of natural resources.”

Major bighorn sheep die-offs have been reported from the mid-1800s to present and have occurred in every western state, including Alaska and Canada (Western Association of Fish and Wildlife Agencies Wild Sheep Working Group website accessed Sept. 12, 2018: https://www.wafwa.org/committees_groups/wild_sheep_working_group/disease_management_venture/). Research has consistently shown that contact between bighorn and domestic sheep/goats can lead to respiratory disease and fatal pneumonia in bighorns (Beecham et al. 2007, Besser et al. 2014, Cassirer et al. 2010, Cassirer et al. 2017, Dubay et al. 2003, Foreyt and Jessup 1982, Goodson 1982, Jessup 1981, Jessup 1985, Lawrence et al. 2010, Monello et al. 2001, Schommer and Woolever 2001, Schommer and Woolever 2008, Suminski 1991) and that disease may persist for decades, limiting population growth (Cassirer *et al.* 2018, Manlove *et al.* 2016). The role domestic sheep

play in causing pneumonia in bighorn sheep is an important issue in multiple-use management (Cassirer et al. 2010). A unified set of habitat management standards to ensure genetically viable populations of bighorn sheep are restored and conserved have not been developed specifically for revising Forest Plans and BLM Resource Management Plans. The following standards are recommended to Federal Agencies and specifically to the Custer Gallatin National Forest when they are revising their Forest or Resource Management Area plans. In addition to these habitat standards, site specific herd by herd bighorn recommendations may be included in separate documents.

- 1) The CGNF will work with neighboring federal agencies to identify and manage/restore historic bighorn sheep habitat to achieve inter-connected meta-populations that are large enough to be genetically viable and self-sustaining over the long term (90% probability of persisting 100+ years) (*See* Reed et al. 2003; Traill et al. 2010, p. 31; and Cassirer et al. 2018, p. 41).
 - a. Rationale: Bighorn sheep habitats in Montana have been greatly reduced fragmented and isolated (Couey 1950, FWP 2010 and Montana Field Guide Bighorn Sheep, accessed April 2019). The same is true across the West (Brewer et al. 2014, map p.3). Maintaining fragmented/degraded habitats that provide for only small isolated populations of bighorn sheep is not sufficient. Such small isolated herds are vulnerable to inbreeding, genetic deterioration and local extirpation for a variety of reasons (Montana Bighorn Sheep Conservation Strategy 2010, pp. 57-58, Brewer et al. 2014 pp. 16-18, and Bailey 2018). Reed et al. (2003) and Traill et al. (2010) suggest thousands not hundreds of individuals are required for a population to have an acceptable probability of riding out environmental fluctuations and catastrophic events, and ensuring the continuation of evolutionary processes. Cassirer et al. (2018) further note: “In the long-term, agencies will need better strategies for the management of larger interconnected bighorn sheep populations for species viability.”
- 2) Where bighorn sheep are limited to small isolated populations (fewer than 1,000 inter-connected animals), and thus susceptible to localized extirpation for a variety of reasons (Reed et al. 2003; Traill et al. 2010; Bailey 2018), bighorns shall be designated a National Forest “Species of Conservation Concern” or a BLM “Sensitive Species”. Under these two management designations, agencies would be instructed to take proactive management actions to restore historic bighorn sheep habitat and to manage and conserve these habitats to provide for genetically viable and self-sustaining populations of bighorn sheep across National Forests/BLM Resource Management Areas.

- a. Rationale: Small isolated populations of bighorn sheep are not genetically adequate, self-sustaining or minimally viable over the long term (90% probability of persisting 100 years or more)(Reed et al. 2003; Montana Bighorn Sheep Conservation Strategy 2010, pp. 57-58; Traill et al. 2010; Bailey 2018; Cassirer et al. 2018). Multi-jurisdictional habitat management plans will likely be necessary to provide for genetically viable populations of bighorn sheep.
- 3) Domestic sheep and goat grazing/trailing shall not be allowed on public lands historic bighorn habitat or where effective separation from bighorns cannot be assured.
- a. Rationale: Research has consistently shown that contact between bighorn and domestic sheep/goats can lead to significant respiratory disease and fatal pneumonia in bighorns (Beecham et al. 2007, Besser et al. 2014, Cassirer et al. 2010, Dubay et al. 2003, Foreyt and Jessup 1982, Goodson 1982, Jessup 1981, Jessup 1985, Lawrence et al. 2010, Monello et al. 2001, Schommer and Woolever 2001, Schommer and Woolever 2008, Suminski 1991) and can persist in populations for decades preventing or delaying recovery (Cassirer et al. 2013, Cassirer et al. 2017, Manlove *et al.* 2016). Essentially, the presence of domestic sheep/goats makes the habitat unsuitable for bighorn sheep and thus precludes the use of the area by bighorn sheep without tremendous risks.
- 4) The CGNF, neighboring National Forests, BLM Resource Management Areas and other federal agencies shall work cooperatively together and coordinate with State Fish & Game Departments, neighboring State and private landowners and other interested parties to identify and address threats to bighorn sheep emanating from federal, state and private lands.
- a. Rationale: Bighorns evolved within vast landscapes of interconnected habitats that will likely require an interagency coordinated effort to restore and conserve to allow for meta-population connectivity, genetic interchange and long term persistence (Brock et al. 2006, Brewer et al. 2014 and Cassirer et al. 2018). However, it may be necessary for State agencies to dispatch foraging bighorn sheep that come into contact with domestic sheep/goats on private or state lands to prevent the risk of pathogen transmission back to the core herd(s) of bighorn sheep. However, in the long term State Fish & Game Departments may have proactive habitat restoration/conservation programs that can be voluntarily negotiated with private landowners in important bighorn sheep habitat.

One example is the Habitat Montana Program, which allows for habitat acquisition or conservation easements with willing private landowners. Furthermore, non-governmental organizations such as the National Wildlife Federation have financial programs to help voluntarily retire domestic sheep allotments on public lands that conflict with important wildlife habitat, including historic bighorn habitat. These habitat restoration/conservation activities need to be coordinated across jurisdictional boundaries based on the ecological needs of bighorn sheep.

- b. Some specific examples we are aware of where interagency cooperation and coordination are needed to protect bighorn sheep using the CGNF include: In the Madison Valley domestic sheep are used for weed control and then trailed up historic bighorn habitat in Standard Creek on the Beaverhead-Deerlodge National Forest. Bighorn sheep ewes and lambs have been observed in the Standard Creek area (likely from the Hilgard herd). This observation was reported to the BDNF by a cattle permittee. In the BLM Bear Trap Canyon Wilderness Unit bighorn sheep are pioneering into historic habitat (likely from the Spanish Creek herd). Montana State University grazes domestic sheep on the adjacent Red Bluff Experiment Station and some bighorn sheep have been lethally removed after approaching/commingling with the domestic sheep. In the Gardiner area occupied by the Upper Yellowstone Complex bighorn herd(s) a private landowner grazes some domestic sheep where a bighorn ram was photographed commingling with the domestic sheep and a disease epizootic ensued.

- 5) Federal agencies shall consult government to government with native tribes to ensure their interests are considered regarding bighorn sheep habitat and population restoration and conservation.
 - a. Rationale: This is required by law (Executive Order 13175, Nov. 6, 2000).
- 6) To maintain separation, if a bighorn sheep is detected in a location where it may result in association with domestic sheep or goats on public lands, the Federal agency shall:
 - a. Immediately implement actions that minimize the risk of contact between these species. This may involve rerouting domestic sheep within a permitted allotment, moving the domestic sheep to a different allotment, or moving the permitted domestic sheep off the federal public lands until the situation can be resolved.

- b. Actively work with the appropriate state agency to develop actions to minimize risk and immediately resolve interaction events.
 - a. Rationale: To prevent pathogen/disease transmission to bighorn sheep.
- 7) The use of pack goats shall not be allowed within occupied bighorn sheep habitat or where separation from bighorn sheep cannot be ensured.
 - a. Rationale: To prevent pathogen/disease transmission to bighorn sheep.
- 8) The use of domestic sheep and/goats shall not be authorized for weed/vegetation control within historic bighorn sheep habitat.
 - a. Rationale: To ensure historic bighorn sheep habitat remains suitable for bighorn sheep population connectivity, recovery and conservation.
- 9) If permitted, domestic sheep and goats shall be counted onto and off of the Forest/BLM by the responsible agency using an effective counting system.
 - a. Rationale: A reasonable effort to account for any missing sheep must be made by the permittee and the responsible agencies. When permitted sheep or goats are determined to be missing, the permittee, Forest Service, BLM and appropriate state wildlife agency personnel shall be notified within 24 hours to assist the permittees in the search for any missing animals.

Thank you for considering these standards for bighorn sheep habitat restoration and population conservation based on the ecological needs of bighorn sheep, which we contend is a species of conservation concern.

Respectfully,

Glenn Hockett
Volunteer President, Gallatin Wildlife Association

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