

USDA Forest Service Update

September 2008



SUBJECT: Disease Transmission from Domestic to Bighorn Sheep

ISSUE: A long-standing body of information exists indicating that die-offs of bighorn sheep populations can occur as a result of diseases contracted from contact with domestic sheep. Published scientific literature and documented bighorn sheep die-offs after contact with domestic sheep supports this relationship. However, there is debate among scientists about the support for the relationship, and the nature of the agency policy, regarding this issue.

BACKGROUND: In 2001, the Forest Service reviewed the scientific background of the transmission of disease (esp. *Pasturella*) from domestic to wild bighorn sheep populations. As a result of the review, a process was developed to find management solutions to resolve conflicts between domestic sheep grazing activities and wild bighorn sheep populations. The 2001 agency letter has been viewed by some FS personnel and external partners as an agency policy to provide separation between bighorn and domestic sheep.

The issue of contact between domestic and wild sheep, and the potential for disease transmission and subsequent mortality in bighorn sheep populations has been a high profile issue in these areas:

Sierra Nevada Bighorn Sheep – The federally ESA listed Sierra Nevada Bighorn Sheep Distinct Population Segment (DPS) was the subject of ESA consultation negotiations between the FWS, FS, and permittees on the Humboldt-Toiyabe and Inyo NF's.

Medicine Bow LMP Discretionary Review – The USDA Deputy Under-Secretary conducted a Discretionary Review of the Chief's appeal decision regarding the viability of bighorn sheep populations in the revised Medicine Bow NF Land Management Plan (LMP).

Payette NF – The Chiefs appeal decision on the Payette NF revised LMP (2003) instructed the Payette NF to amend the LMP to provide for bighorn sheep viability. The forest conducted a risk analysis of existing grazing allotments, and the public review resulted in renewed debate about the nature of the disease transmission between domestic and bighorn. The Payette NF sponsored a science panel of prominent veterinarians and wildlife disease specialists. They reviewed the risk analysis, published literature, and developed 8 key consensus points, including the important conclusion that it is, “prudent to undertake management to prevent contact between these species....”. Recently, the State of Idaho developed interim wild-domestic sheep guidelines. We are collaborating with the State of ID while continuing our collaborative work with other States and agencies.

The Western Association of Fish and Wildlife Agencies (WAFWA) recently established a **Wild Sheep Working Group** and a subgroup represented by state, federal (FS and BLM) and provincial agency sheep experts. The subgroup developed a consistent framework for State, Federal, and Provincial agencies to tier to when developing management guidance in areas of potential contact or interaction between wild sheep and domestic sheep and goats.

There have been three workshops sponsored by American Association of Wildlife Veterinarians, in conjunction with state and federal agencies, to review and assess the current understanding of disease transmission between these two species, and to provide recommendations for future research and management. A 4th workshop in Boise Idaho focused on improving our understanding of bighorn sheep disease issues. Presentations were made at the workshop by Forest Service managers involved in the Payette analyses. Reviews of these assessments are posted on the U.C. Davis Wildlife Health Center website (<http://www.mwvcrc.org/content/view/100/102/>).

Current Forest Service Strategy

1. We have updated our 2001 FS white paper describing the scientific background of the relationship of disease transmission from domestic sheep to wild bighorn sheep populations to incorporate the latest peer-reviewed scientific information, including the Payette Science Panel Review. This paper has undergone peer blind review and recently published as a 2008 GTR entitled, *A Review Of Disease Related Conflicts Between Bighorn Sheep And Goats And Bighorn Sheep*, authors T. Schommer, and M. Woolever. The GTR is a review and summary of scientific literature related to the transmission of disease from domestic sheep and goats to bighorn sheep (http://www.fs.fed.us/rm/pubs/rmrs_gtr209.html).
2. To best frame this issue, we have begun a spatial analysis of the magnitude and extent of occupied big horn habitat that occurs within active domestic sheep and goat allotments.
3. The GTR will be used in conjunction with input from stakeholders, State agencies, BLM and others to establish management practices. In addition, we will use this information to help us develop our policy to manage situations where there is a potential of wild and domestic sheep conflicts. During this process, the Forest Service will also seek input from other federal agencies, American Indian tribes, states, the livestock industry, and other key stakeholders to help develop guidelines to manage situations where there is potential conflict between wild and domestic sheep.
4. Support the development of State management plans for domestic sheep and wild bighorn sheep to inform our land management planning and implementation activities.
5. Support national meetings, such as the bighorn/domestic disease risk assessment workshops, designed to improve incorporation of science findings into management decisions.

Contacts: Anne Zimmermann, Director Wildlife, Fish, Rare Plants, 202-205-1167; Janette Kaiser, Director, Rangelands Management, 202-205-1185; Eugene DeGayner, National Wildlife Program Leader, 202-205-1281, edegayner@fs.fed.us.