



August 15, 2017

Brian Ferebee
Regional Forester
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Lakewood, CO 80401

Dear Brian:

The Wild Sheep Foundation (WSF) is aware of recent correspondence you received from Ms. Bonnie Brown, on behalf of the Colorado Wool Growers Association (CWGA), criticizing the jointly-developed U.S. Forest Service (USFS)/Bureau of Land Management (BLM) Risk of Contact (RoC) analytical modeling tool. While WSF and other wild sheep interests fully recognize that landscape/resource models inherently employ various assumptions, it is our firm belief that assumptions used in the current USFS/BLM RoC model are based on, and validated by, thousands of telemetry data points from radio-collared bighorn sheep, which provide real data on seasonal and daily movements of bighorns. In addition, we feel the need to remind you that the RoC model was developed under FS contract by the University of California, Davis, Center for Animal Disease Monitoring and Surveillance (CADMS). The core CADMS objective is to develop surveillance systems and models to detect the presence of and to predict risk of selected animal diseases through the world. The model they developed represents the best science available. The BLM is not "...cutting and pasting USFS modeling information...into its EAs and Resource Management Plans..."; statements such as this indicate a lack of awareness that the RoC model development was jointly supported by both USFS and BLM, with vital input from landscape epidemiologists, disease ecologists, and GIS specialists from state wildlife and other agencies.

The RoC model was not developed in a vacuum; rather, numerous peer-reviewed scientific publications were utilized and cited, publications which continue to document the adverse impacts of respiratory pathogens on bighorn sheep, regardless of where those pathogens might have been introduced from. If it would make some interests more comfortable, the RoC model could easily be renamed "Risk of Contact With A Grazing Allotment"; however, that would not alleviate concern about potential contact between domestic sheep and/or goats that utilize an allotment and bighorn sheep on or near that grazing allotment. WSF prefers not to play semantic games; the risk is real and ignoring it will not make it go away.

The joint issue statement [attached] from The Wildlife Society (TWS) and the American Association of Wildlife Veterinarians (AAWV) (2015) fully acknowledges that wild sheep are susceptible to a variety of diseases that affect herd viability, the most important of which are respiratory infections that result in wild sheep pneumonia. Pneumonia caused by respiratory bacteria (e.g., *Pasteurella multocida*, *Mannheimia haemolytica*, *Bibersteinis trelahosi*, *Mycoplasma ovipneumoniae*) often

results in mortality of a large proportion of bighorn populations, across all age classes, typically followed by years of depressed lamb survival. This is not an assumption; this is real, and well documented.

It must be pointed out that much of the research on disease transmission has been conducted by leaders in animal health, at accredited veterinary colleges and universities. Co-authors on some of these peer-reviewed scientific publications include some of the most vocal critics (i.e., “deniers”) that continue to stoke the flames of disagreement over the potential for pathogen transfer and subsequent pneumonia in bighorn sheep.

As for the claim that “...current management focus(es) almost exclusively on potential contact with domestic sheep, while disregarding a multitude of other factors...”, it must be pointed out that the current focus on the single, well-supported risk factor (i.e., *Mycoplasma ovipneumoniae* transmission) is based on in-depth research, backed by numerous scientific publications (Besser et al. 2013, Besser et al. 2014, George et al. 2008, Lawrence et al. 2010, Wehausen et al. 2011, WAFWA Wildlife Health Committee 2014, WAFWA Wild Sheep Working Group 2012). A number of these publications were co-authored by the very “multi-disciplinary resources” (e.g., USDA ARS) referred to in Ms. Brown’s CWGA letter.

Other compelling research has not been conducted or (yet) published that describes the broad impact of “other factors”; until such time that other research is completed and published, this is a diversionary argument that avoids action to address an established, strongly-supported risk factor. Published research results are the litmus test of effective research; the preponderance of published research clearly supports temporal and spatial separation between domestic sheep and goats and wild sheep. If “all factors” must be fully evaluated before any action can be taken, no action will ever be taken. Rather, current management actions based on the strongest available evidence (i.e., “best available science”) must be implemented, while continuing to research these other suggested factors. Recent court findings have supported and bolstered USFS and BLM reliance on the “best available science” in resource management issues such as this one.

Wild sheep managers continue to call for and implement appropriate management to achieve and maintain effective separation between domestic sheep and goats (known carriers of the respiratory bacteria documented as lethal to wild sheep); it is indescribably frustrating that some individuals and organizations refuse to acknowledge the potential risk of pathogen transfer and subsequent respiratory disease in bighorn sheep following exposure to domestic sheep and/or goats. In states and provinces where the risk of contact is recognized, progress toward solutions has been made; in jurisdictions where acknowledgement lags (e.g., “...largely fueled by speculation and assumptions about disease processes...:”), divided camps persist, and progress is hindered.

The CWGA request “...that the USFS stop using the term ‘Risk of Contact’...” is a misguided attempt to deflect growing realization and recognition that there is a risk when domestic sheep and goats utilize public land grazing allotments in or very near important seasonal/yearlong bighorn sheep habitat.

In fall 2015 and again in fall 2016, Congress validated the RoC analysis by directing the USFS and BLM to complete RoC analyses west-wide and encouraged collaborative efforts and transparent data

sharing with affected stakeholders. Completion of the RoC analysis is the pivotal variable to identify areas where domestic sheep, on federally-managed lands, pose a risk of contact, pathogen transfer, and subsequent pneumonia to bighorn sheep. Identifying areas of concern, using the best available science and the best available data regarding bighorn sheep populations, movements, and habitat use, federal land-management agencies should continue to engage States, Tribes, Industry, and NGO's via NEPA to identify potential mitigation of identified risks.

Until such time that the mysteries of disease transmission can be fully understood and effectively managed for, the only prudent and logical solution is to analyze the risk of contact and provide for separation. Separation is the only tool that works at this time. The Wild Sheep Foundation respectfully disagrees with the position and recent correspondence from the Colorado Wool Growers Association to your office. WSF continues to support and advocate for both the USFS and the BLM to conduct comprehensive Risk of Contact analyses.

We would be happy to visit further on this or any other topic regarding U.S. Forest Service management of bighorn sheep habitat on USFS-managed lands.

Sincerely,



Brett K. Jefferson,
Chairman



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President & CEO

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