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Title:

Comments: As a lifelong resident of Idaho, an avid outdoorsman and employee of a state wildlife agency I am expressing my concern over the potential closure of forests to goat packers, in parts or all of the Clearwater-Nez Perce National Forest. I feel strongly that this move is not motivated by sound science and reasoning.

The attached pdf file, "Andy-Irvine-Comments.pdf" lists several concerns put forth by the North American Pack Goat Association to the 2017 Shoshone National Forest plan revision. Please review these concerns as most appear to be relevant to the Nez Perce- Clearwater NF revision.

Attachment 1 - "Andy-Irvine-Comments.pdf"

I would like to add my support to the concerns raised in the Andy-Irvine-Comment document. Specific to those comments, in Sect 1.1 page 12 and under FW-STD-WL-02, goats are categorized as being a source of diseases in bighorn sheep. As the Andy-Irvine-Comment document points out, this has not been scientifically proven.

Specifically under FW-GDL-WL-05 it states;

"New authorizations and permit reauthorizations for domestic goat packing should include provisions to prevent disease transmission between domestic goats and bighorn sheep."

Based on the evidence presented in the Andy-Irvine-Comment document, there is a lack of evidence to support that disease transmission from pack goats is a concern that requires any kind of "provisions" beyond what might be reasonable to provide some limitations to reduce potential stressors. I am also wondering what all is being considered under the term "provisions". I am concerned that stating it this way provides too much room for interpretation and unwarranted restrictions to access that are not yet being identified.

Beyond this I think it is important to be more specific in identifying that it is a pathogen that is suspected of being passed (which lacks evidence in the case of pack goats). By stating that it is the disease being passed there is an opportunity for wildlife biologists and resource managers to marginalize the significance of other contributing factors in the multi-factorial development of diseases in bighorn sheep.

Having worked for many years at a fish hatchery and recognizing the impacts of all the other factors involved in disease expression, beyond just pathogen presence, I see evidence for other contributing factors being more significant and worthy of consideration. Here we have numerous pathogens in our source water that we will never eradicate. It would be foolish to even try. In the wild fish populations that exist in Rapid River, which also supplies water to the fish hatchery, the diseases we manage for are rarely, if ever, expressed. In our fish rearing ponds, these pathogens do not become an issue if we maintain fish health by feeding them appropriate quantities of high quality feed and maintain the fish's environment; which involves managing fish density, ensuring adequate water flow and water quality.

(See the following Vin Diagram from one of our fish health documents)

This same situation would be true of bighorn sheep in the wild. Are other factors in disease expression in bighorns being marginalized and understudied? Here are two studies I came across that do consider other factors. Please review those attachments:

Attachment 2- "2002-Hnilicka et al.pdf"
Attachment 3- "Western Wildlife Ecology"

I believe further evidence of the importance for research into other factors contributing to diseases and die-offs in bighorn sheep, is presented in the introduction section of the Nez Perce-Clearwater Forest Plan Revision. In the introduction it states the following;

"Bighorn in the planning area have survived when other regional populations have been reduced or extirpated. This, coupled with the fact that domestic sheep grazing on the Nez Perce-Clearwater has been ongoing for centuries, make these populations of bighorn particularly interesting."

The fact that there has been centuries of domestic sheep grazing around bighorn sheep in the Nez Perce-Clearwater NF seems to be evidence against domestic sheep pathogen transfer as being the primary cause for concern in disease expression in bighorn sheep. This should cause us to ponder what other environmental factors might be contributing to this issue.

There are other forest practices identified in the linked studies that identify other highly plausible factors as being involved in bighorn sheep disease expression. The forest practice of pesticide application by numerous public trust agencies and private forest enterprises is one such factor; one that, in all agencies, is lacking sufficient scrutiny. This is true not just of bighorn sheep but also in other diseases involving other wildlife and plants. (Review the following attachments for research into environmental factors in disease expression in other wildlife).

Attachment 4- "Exploring a Potential Root Cause of Elk Hoof Disease"

Attachment 5- "Elevated Silver, Barium and Strontium in Antlers, Vegetation and Soils Sourced From CWD Cluster Areas: Do Ag/Ba/Sr Piezoelectric Crystals Represent the Transmissible Pathogenic Agent in TSEs?" Attachment 6- "Effects of Neonicotinoid Insecticides on Physiology and Reproductive Characteristics of Captive Female and Fawn White-tailed Deer"

Even with mounting evidence of harm to animal and human health and lack of evidence of efficacy, in some cases, there appears to be no changes in policy that limits application of pesticide or advances more holistic approaches. As well there does not appear to be any significant amount of agency research that considers pesticide use as a factor in situations of declining forest and animal health.

In the forest plan sections regarding elk habitat, such as in MA3-OBJ-ELK-01, the plan makes recommendations for "treatments to restore the natural range of variation for early seral habitats." If this is indicative of what I have witnessed to date in National Forest and other agency plans, I would suspect this to mean that pesticide applications will be used as the primary tool in managing these habitats. Given the potential for the environmental costs and the cost incurred from animal health issues that might result from pesticide use I would strongly ask the forest to consider other more holistic approaches.

To stress this point I would like to address a case in point that I have witnessed, first hand, in the recent campaign in the Nez Perce - Clearwater NF to eradicate poison hemlock. It is in this effort that I have witnessed how certain ideas about invasive weeds can manifest in the absence of clear evidence for concern and how this played out, specifically in Idaho County, to result in virtually no change to the abundance of hemlock and a potential contribution to the first case of elk hoof disease near the town of Whitebird. I make this claim having worked with the individual whose summer job was to spray weeds for Idaho County and who, prior to this campaign, brought attention to the "weed problem" at the Rapid River Fish Hatchery to his summertime

supervisor. In conversation with an employee at the Slate Creek Ranger Station, it was stated as if Rapid River Fish Hatchery was ground zero in this infestation of invasive poison hemlock in the county. Investigating into how invasive poison hemlock is, I discovered no evidence that there has been illness or death, aside from a case about 10 years ago back east where one individual ate two poison hemlock roots and died while his friend, who at one, was ill but lived. Perhaps there is evidence that I am not aware of that shows evidence of impacts in the Nez Perce-Clearwater NF to livestock and humans?

The last issue of concern is in regards to section, FW-GDL-WL-02.

"Infrastructure, such as communication towers and energy developments, should not be located such that they adversely affect dispersal, migration, crucial winter habitat, or movement of wildlife."

While I very much agree with these concerns to the erection of communications towers, I would further request that forest managers consider the health impacts to wildlife, plants and humans from the operation of these towers. A growing body of evidence has linked electromagnetic radiation to environmental, animal and human health issues. Please review the following attachments regarding this concern.

Attachment 7- "U.S. Fish & Dervice Concerns Over Potential Radiation Impacts of Cellular Towers on Migratory Birds and Other Wildlife"

Attachment 8- "A BRIEFING MEMORANDUM: What We Know, Can Infer, and Don't Yet Know about Impacts from Thermal and Non-thermal Non-ionizing Radiation to Birds and Other Wildlife"

Attachment 9- "Anthropogenic radiofrequency electromagnetic ?elds as an emerging threat to wildlife orientation"