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USDA Forest Service

Attn: Jeff E Schramm, Forest Supervisor Chugach National Forest

161 E. 1st Ave, Door 8

Anchorage, AK 99501

USDA Forest Service

Attn: Sue Jennings, Objection Reviewing Officer Alaska Region

709 W. 9th St.

Juneau, AK 99801

RE: Pack Llama Prohibition/Restriction - Chugach National Forest Land Management Plan (CNFLMP) Dear Mr. Schramm and Ms. Jennings:

We have operated a commercial llama outfitting and breeding operation since 1977. We maintain a pack string of approximately 50 geldings and a brood herd of 40-50 females. Over the years, I have commented on and given input on a number of management plans presented by USFS, BLM, and NPS, primarily in regard to their management proposals for llamas. They have all been conducted under the NEPA process and there has typically been good accountability as dictated by NEPA process.

This CNFLMP is a glaring exception. It appears the process CNF engaged in, with regards to llamas, was an intentional subversion of the NEPA process and was sorely lacking in accountability and good faith dealing. The number and nature of the irregularities defies characterization as oversights or honest mistakes.

1. Llamas were not mentioned in the draft EIS or draft management plan. In the final plan, "llamas" are added with domestic sheep and goats for separation (banning) based on disease threat to wild sheep. It seems reasonable that the use of the genus term "llamas" was intentionally obscure so as to escape notice on final plan review. It appears in both the final EIS and Final Plan so it is not an inadvertent mistake.
2. The insertion "llamas" is noted as a plan update. That seems a rather cavalier characterization of a change that bans a user group by fiat rather than by process. Besides llama owners and users, it seems the USFS would take exception to a single forest jurisdiction pursuing a management plan in this manner. It is without precedent in the agency and in conflict with other forests that have significant wild sheep populations and concurrent use of llamas.
3. It is stated the "update" adding llamas to the separation of domestic sheep and goats was prompted from

comments received in the comment period. Searching over 5000 comments on the draft plan and EIS, I find no such comments. I would not expect to find comments on llamas/lamas since they were not included in the drafts. It would seem reasonable that comments compelling enough to cause such a significant detour would be listed and discussed.

4. CNF cites research papers that point to domestic sheep and goats as carriers of polymicrobial pathogens responsible for pneumonia die offs in wild sheep populations. Most of the papers do not mention llamas and if they do, they indicate they are not a threat. One hypothetical risk assessment (Garde, 2005) postulates possible disease transmission with llamas, but it is presented as conjecture that has not proven credible. To cite these documents and use them as a basis for separation of llamas indicates CNF either did not read the documents or committed a scientific blunder by equating llamas (Camelidae) with both domestic and wild sheep and goats (Bovidae). Wide phylogenetic separation of a suborder/ family magnitude (Tylopoda/Camelidae vs Ruminantia/Bovidae) precludes any merit for this illogical policy leap.

1. It's interesting that CNF bans domestic sheep and goats as a disease threat to wild sheep based on research. Then without supporting research or documentation of a disease threat to wild sheep, bans llamas, (a domestic species) because they might have contact with wild sheep. The obvious question is "Why llamas?" Llamas have no endemic diseases and have not demonstrated disease transmission to any species of wildlife. Other domestic species that are likely to have contact with wild sheep in their native ranges are cattle and horses and both present a greater disease threat to the native sheep.

-Cattle have a menu of endemic diseases that are historic and recurring. Given cattle are in the same phylogenetic family (Bovidae) as sheep, disease transmission is likely. BVD, Johnes, Tuberculosis, PI 3, Bluetongue, and Vesicular Stomatitis are significant. Many bovine respiratory infections (esp. shipping fever) are caused by *Pasturella* sp, the lethal pathogen in wild sheep die offs. Though the Garde 2005 paper lists most of these diseases as possibilities for llamas, it cites no occurrences or transmission and clearly states none have occurred. CNF failed to comprehend this and used conjecture to recommend llamas for separation. By contrast, documentation and research concerning the enumerated cattle diseases is widely published and readily available. It appears disease transmission from domestic species was less a concern than specifically banning llamas.

-Horses are less likely to transmit disease to wild sheep because they enjoy a similar level of phylogenetic separation as llamas. However, in contrast to llamas that have no endemic diseases, horses have a number of equine-specific diseases and syndromes that predispose them to secondary respiratory infections. The pathogens causing these pneumonias are often the same ones found in wild sheep pneumonias. Secondary pneumonias in llamas are rare just as primary disease syndromes are rare. Additionally, vesicular stomatitis is very contagious in horses (llamas are resistant) and could be communicated to wild sheep.

Horses' greatest threat to wild sheep populations is their impact on the land and environment. Habitat destruction is the biggest threat they pose. In view of these dynamics, it's puzzling why llamas are banned by CNF and horses are not considered a threat.

-Human presence in sheep habitat presents a greater disease threat than do llamas. TB, MAP (Crohn's), and contagious ecthyma (Orf) have a much higher prevalence in humans than llamas and are capable of zoonotic transmission with wild sheep. Mineral starved sheep ingest the salt deposits in human urine that is characteristically high in electrolytes. MAP and TB often can present as either a primary or secondary genitourinary infection in infected humans. High concentrations of mycobacterium in this urine are adequate to establish a chronic and

debilitating infection and chronic shedding. Human fecal deposits are also potential reservoirs of mycobacterium adequate to cause infection in scavenging sheep.

Contagious ecthyma is passed between sheep species and humans through direct contact transmitting the parapox virus. The trapping and handling of sheep by biologists and technicians is a dependable route of zoonotic infection. Additionally, the stress caused by the trapping of wild sheep is arguably a predisposing factor for increased disease susceptibility in the subject animals. Equally stressful is humans hunting wild sheep, unless competent marksmanship escalates beyond stress to lethal impact.

CNF really needs to examine their consistency and sense of proportion in banning llamas for the protection of wild sheep while not even considering the impacts of cattle, horses, and humans.

1. USFS is a land management agency that is charged with comprehensive administration and protection of public land resources. Preserving associated wildlife resources are part of that administration, but they typically defer to state wildlife agencies' recommendations as the states actually own and have jurisdiction over the wildlife on USFS lands. CNF has ignored the fact that Alaska Department of Game and Fish made a statement in June 2018, that they do not consider llamas as a disease threat to any wildlife species including wild sheep. This position is supported by research done by Wild Sheep Working Group, the collaborative research group focused on wild sheep and representing the Western Association of Fish and Wildlife Agencies. Why is an administrative agency ignoring more qualified research/management agencies on a wildlife disease issue?

2. The impacts of this decision would probably not affect CNF significantly as llama use there is low. It would have far-reaching effects in the lower 48, particularly the western states where llama use is significant by the public, land management agencies, and commercial outfitters and guides. CNF is admittedly isolated, but it is still under the jurisdiction of USFS. It would be unwise for USFS to allow a few administrators who consider themselves independent of procedure to set a precedent policy that is ill-conceived and will create significant push back in the lower 48.

3. Llamas offer distinct advantages in the back country in terms of reduced impacts on trails and vegetation, low disease threat to wildlife, and spreading impacts of visitors. Low off-season maintenance is a distinct advantage for users as well. As the land managers responsible for limiting impacts on land resources and promoting the best sustaining practices, it would seem prudent for CNF to consider encouraging llama use instead of banning it.

Considering the compromises that are apparent in the final plan, it seems there are two alternatives for CNF: 1.) Withdraw the "lama" references from the final plan and EIS and return to the language in the draft forms of both documents 2.) If CNF thinks they have legitimate reason to ban llamas, they need to return to the draft phase of the EIS and plan, state those reasons, and allow comment and input so they are bringing the policy through the front door in transparent, prescribed fashion and the issue is allowed full consideration.

Thank you for the opportunity to give comment. Please continue to apprise me of the course CNF pursues in dealing with this matter.

Stan Ebel, president

Buckhorn Llama Co., Inc.