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USDA Forest Service

Attn: Objection Reviewing Officer

EMC, Mailstop 1104

1400 Independence Ave., SW Washington, D.C. 20250 email: objections-chief@fs.fed.us

Subject: Notice of Objection: Use of Sheep, Goats and Pack Goats EIS / Shoshone National Forest

Dear Reviewing Officer:

I wish to file an Objection to the Shoshone National Forest Draft Record Record of

Decision (ROD), the Final Environmental Impact Statement (FEIS) for Use of Domestic Sheep, Goats, and Pack Goats, Shoshone National Forest, Wyoming, as well as the supporting document on which this FEIS is based, the Risk Analysis of Disease Transmission between Domestic Sheep and Goats and Rocky Mountain Bighorn Sheep (RADT, 2017). The legal notice was published in the Denver Post and Federal Register in December 2017. The Reviewing Officer is Glenn Casamassa, Associate Deputy Chief. The Responsible Official is Brian Ferebee. I previously commented on the Supplemental Draft EIS and RADT in a letter dated August 9, 2017. A copy of my original comment letter should be available in the Public Record or Project file; I can also furnish you another copy upon request. The statements I provide in my Objection are linked to my previously-submitted comments; therefore I qualify to file an objection to the Final EIS, pursuant to 36 CFR 219.53. In addition, I have concerns that arose after the opportunity for formal comment ended.

My comments are as follows:

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Perform a separate quantitative risk analysis on pack goats alone, focussed solely on disease transmission rather than risk of contact. A study, conducted by in 2016, by Margaret Highland, Research Veterinarian with the Animal Disease Research Unit-ARS-USDA Washington Animal Disease showed that pack goats carry Mycoplasma ovipneumoniae (MOVI), at very low levels, these levels were significantly lower than domestic sheep and domestic goats. Although this study has not yet been published, the results have been presented. This study was acknowledged in the

Shoshone's "Response to comments," however, there are now solid numbers with which to conduct a quantitative vs. a qualitative risk analysis. ?

Please do a quantitative analysis and compare the results with the qualitative analysis used in the RADT. The steps would be as follows:

Assign probabilities to the following events:

1. A bighorn sheep leaving its core home range
2. travel far enough to reach a pack goat use area,
3. intersect the allotment or pack goat use area
4. come into physical proximity to a domestic sheep or goat in the allotment or pack goat use area,
5. contract a disease from the domestic sheep or goat.
6. return to their, or another herd's, core home range,
7.
transmit disease to other members of their, or another, herd.

This quantitative method could easily be completed by including using Dr. Highland's research results for MOVI presence in pack goats, and assigning probabilities to the other events. The results should then be compared with the HIGHLY SUBJECTIVE Qualitative Method used in the RADT. At the very least, this will provide a more robust, more easily understood Analysis.

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Submit the RADT to a rigorous review process by qualified reviewers. In my previous comments, I requested that the RADT be reviewed by a qualified Specialist. I emailed Casey McQuiston, Planning Staff Officer, on January 16 2018, requesting all the Reviewer's comments on the RADT, as well as their qualifications. Mr. McQuiston replied to my request by providing a review of the RADT by Patty Klein, Washington Office, Veterinary Medical Officer, which included in the project record. I received this Review document after the opportunity for formal comment ended, but I have concerns about this Review and wish to include those concerns in my Objection.

Ms. Klein, the Reviewer, questions the methods and results of Dr. Highland's study on Pack Goats, as well as the implications of the study. In her Review, Ms. Klein questions the methods that were used: "I appreciate Dr. Highland's collegiality to provide us with an excerpt of raw data summarizing 83 premises and 575 pack goats tested in 13 states. It is my understanding that the samples collected were tested by several different laboratories and it is not clear if a standardized testing protocol was used. The numbers of premises per state vary from 1 to 25, and the number of animals per premises tested varies from 2 to 136 raising some questions as to statistical power to determine percent prevalence in such small sample sizes with a stated assumption of low to no prevalence of disease in these domestic goats. Therefore, since a complete analysis of this data in the context of the full study has not yet been peer-reviewed or published, there should be reservation on drawing any conclusions or interpretation of the data until all information becomes available (P Klein 2017)."

I shared Ms. Klein's review with Dr. Highland. The following is a summary of Dr. Highland's response to Ms. Klein's questions (Highland, personal communication 2018):

Had Ms. Klein contacted Ms. Highland, she would have learned that, in fact, the results from the majority of the animals that were tested on the first round of nasal swabbing were submitted to an accredited laboratory for testing. Multiple laboratories did not test samples. All samples were tested in Dr. Highland's laboratory with duplicate swabs from the first sample collection tested at WADDL for confirmation of my testing. Dr. Klein does not have any sort of understanding of the data that Dr. Highland outlined and shared with the Forest Service. The (National Animal Health Monitoring System) NAHMS study has NOT been peer reviewed, no more than the packgoat study[hellip]..the NAHMS study was put out in a brief by APHIS, not a peer reviewed publication. The number of premises per state is irrelevant in the Pack Goat study. The Study was not trying to compare states/regions, simply test as many volunteer premises as we could in order to provide a statistically significant. Dr. Klein is also confused about the NAHMS study and randomly throws "goats" in to the picture. The 453 premises were sheep operations, not sheep and goat operations. (M. Highland, personal communication 2018).

In addition, Ms. Klein does not seem familiar with the methods and practices of risk analysis. In response to the question: "Are the rationale for risk ratings and the ratings themselves clearly articulate and consistent with the presentation of best available science?"

Here is Ms. Klein's statement/answer in her review of the RADT:

"In 2012, the Wild Sheep Working Group of the Western Association of Fish and Wildlife Agencies (WAFWA) developed "Recommendations for Domestic Sheep and Goat Management in Wild Sheep Habitat". Below is a summary excerpt: 'The use of domestic sheep or goats as pack animals by persons that travel in identified wild sheep habitat should be prohibited by the appropriate management agency (e.g., USDA Forest Service 2011). Where legislation or regulations are not already in place, an outreach program to inform potential users of the risks associated with that activity should be implemented to discourage use of domestic sheep or goats as pack animals.

Further, responsible agencies must require that domestic sheep or goats are in good health before being turned out. For example, Alberta and British Columbia have developed health certification protocols (Pybus et al.1994) that must be complied with before domestic sheep are turned out for vegetation management in conifer regeneration efforts. We emphasize that the higher the risk of association between domestic sheep or goats with wild sheep, the higher the certainty of domestic animal health should be.

Further, it must be recognized that even clinically healthy domestic sheep or goats can still carry pathogens that are transmissible to wild sheep, and thus, pose a significant risk to wild sheep. In areas of high risk of association between wild sheep and domestic sheep or goats, agencies and permittees should ensure enhanced monitoring of grazing and trailing patterns using global positioning system (GPS) collars or other technology that provide detailed data on movements and grazing patterns. While enhanced monitoring will not reduce risk of association, it is vital for development of meaningful risk assessments and to ensure appropriate management recommendations are taken to achieve effective separation.'

The 2 key points to be revisited are:

1. Development of standardized testing protocols for health certification of domestic sheep and goats to determine disease prevalence within domestic herds. However, organisms like M.ovi and Pasteurella (Mannheimia, etc) are intermittently shed by reservoir hosts. Stress may elicit active shedding by individuals that may not be documented from on-farm herd testing.
2.
There are other potentially significant (non-respiratory) diseases of domestic sheep/goats to which BHS may be exposed directly or via environmental contamination. These should be considered in relative risk assessments. See aforementioned examples (P. Klein 2017)."

Ms. Klein did not answer the question. Instead, she 1) questions whether testing is adequate, and 2) brings up other diseases and pathogens that might affect Bighorn Sheep, in addition to MOVI. She never answers the question about whether or not the rationale for determining risk ratings was accurate and defensible. In addition, she cites studies that focused on sheep and domestic goats, not pack goats, and these studies pre-date the study conducted by Dr. Highland. Finally, she cites old management recommendations from WAFWA from 2012, that pre-date Dr. Highland's packgoat-specific study, does not consider pack goats separately, lumps domestic sheep and goats with pack goats, management recommendations that were developed long before the difference between pack goats and other domestic goats was recognized.

As stated earlier, I forwarded Ms. Klein's review to Dr. Highland, and she submitted a response. Dr. Highland's response is supported by Dr. Don Knowles, Research Leader of the Animal Disease Research Unit of the

Agricultural Research Service,

USDA and Professor, Department of Veterinary Microbiology and Pathology,

Washington State University. I have attached Dr. Highland's response to my Objection, in the References cited.

To summarize, Dr. Highland, Ms. Klein's qualifications as a reviewer are seriously in question. A simple phone call or follow-up between two professionals, Ms. Klein and Ms. Highland, would have answered Ms. Klein's questions. When I requested Ms. Klein's qualifications from Casey McQuiston, the response was "we do not maintain records on qualifications as part of the NEPA process." This is a grave oversight on the part of the Shoshone National Forest. Qualified personnel are critical to sound scientific review. Please provide additional review comments of the RADT from qualified Reviewers that are familiar with the best available science, are not biased, and recognize the difference between pack goats and other domestic sheep and goats.

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Include an analysis of the risk of contact from other wildlife and domestic animals that may carry pathogens, and include it in the RADT. Ms. Highland also has recently discovered data that supports the fact that NOT ONLY members of the subfamily Caprinae (goats, sheep, muskoxen) can carry M. ovipneumonaie. To date USDA-ARS-ADRU and testing performed at an accredited laboratory have both identified M. ovipneumonaie in white-tail deer and bison in the lower 48 states of the United States. Information/data to support this statement can be provided to the Forest Service by USDA-ARS-ADRU/Highland. The testing performed to confirm these findings includes isolation of M. ovipneumonaie and PCR and sequencing of the bacterial genome from samples collected from both healthy animals (bison and deer) and animals exhibiting respiratory illness (deer). This discovery was first made in November 2017 when 2 of 4 tested white tail deer in a captive zoological setting were confirmed positive; in December 2017 the USDA-ARS-ADRU had a PCRsequence positive M. ovipneumonaie detection in the only nasal swab that they had ever tested from a bison. Subsequent investigations and communications with a DVM in the upper Midwest of the U.S. in December 2018 led ARDU/Highland to the referred accredited laboratory and the discovery that M. ovipneumonaie has been confirmed by that laboratory in white tail deer and bison (personnel communications with the DVM case coordinator at said laboratory). Should Forest Service personnel want further detailed information to corroborate these findings they should (and are obligated by

Congressional appropriation to) contact USDA-ARS

(maggie.highland@ars.usda.gov). This information was delivered at the American Sheep Industry Convention in San Antonio, TX on February 2, 2018.

*
Remove all reference to "disease" from the RADT title & summary with respect to Pack Goats. The "Risk of Contact" section of the RADT analyzes risk of physical contact ONLY, not risk of disease transmission. The very title of the RADT is inaccurate, as are all references to "disease transmission" with respect to Pack Goats in the RADT, the Draft Record of Decision (ROD) and the Final Environmental Impact Statement (FEIS). Diseases are not transmitted. Pathogens are transmitted, and disease may or may not ensue after contact.

"Risk of disease transmission with a subsequent bighorn mortality event, however, was not modeled quantitatively" (RADT p22). Yet somewhere along the line, the RADT morphed into a document "Risk of Disease Transmission." The link between physical contact and actual disease transmission is not properly illustrated. Instead, many completely unfounded suppositions were made with respect to lack of "human control over domestic sheep or goats." Contact is NOT disease transmission. In order for disease transmission to occur, the organism that causes disease must be present in the host, some type of physical contact must occur, and the recipient of the contact must be susceptible enough to the disease (e.g. stressed by environmental or other

factors) to become symptomatic.

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Analyze pack goats separately. During the course of the Shoshone Plan Revision, commenters from the Pack Goat Community repeatedly requested that Pack Goats be analyzed separately from sheep and domestic goats. Yet, the Shoshone has continued to lump sheep, domestic goats, and pack goats together, in the literature review, in the RADT, and thought the RADT itself. Indeed, the Reviewer of the RADT, Patty Klein, continues to include pack goats with other domestic goats and sheep, and dismisses the data without full knowledge of the methods and validity of the research. There is no substantive proof that pack goats contribute to risk of disease transmission, and this is confirmed by Dr. Highland's research results. In addition,

there is now real data that show that Pack Goats carry MOVI at very low levels, yet, Ms. Klein (and by default, the Shoshone), continues to lump Pack Goats with sheep and domestic goats. The only analysis in the RADT that considers Pack Goats separately is to look for weaknesses in proposed mitigation measures that would further reduce risk of contact between pack goats and bighorn sheep, (RADT p30). These mitigations would effectively achieve the Forest Plan goal of "maintaining lowest possible risk of disease transmission" (SENS Goal-03).

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Evaluate proposed mitigation measures for pack goats objectively using accredited Subject Matter Experts. The RADT considered mitigation measures that would further reduce risk of contact while "maintaining lowest possible risk of disease transmission (SENS Goal-03). However, each mitigation measure is countered by the possibility that it might not work, with no justification for these statements. Please provide rationale for the following statements: "pack goat users may be disinclined to report contact between their goats and bighorn sheep, or even lost goats, for fear of incurring additional restrictions on their use[hellip]users may not always be able to control their pack goats despite implementation of these techniques. Pack goat use occurs in remote, rugged settings where circumstances cannot always be controlled, and pack goats occasionally are lost on the Forest for a variety of reasons such as being scattered by predators or having too many tied on a high-line[hellip]bighorn sheep and domestic sheep and goats are socially attracted to each other, which increases the probability that they will make the close contact necessary for disease transmission. This could occur even under a scenario where pack goats were under close control[hellip] As a result, there would still be substantial uncertainty associated with the potential for disease transmission to occur resulting in a bighorn sheep pneumonia die-off." This last statement seems highly unlikely, given the fact that pack goats have proved to have extremely low levels of disease-causing bacteria. The Shoshone has failed to establish a strong link between "contact" and "disease transmission." Finding weaknesses in the mitigation measures does not sufficiently establish that link.

There is no such thing as a "journey-level" Wildlife Biologist, and Wildlife Biologists have no experience with pack goats, compared with pack goat owners. . In other words, the assignation of "moderate risk" of contact, by a "journey-level" (whatever that means) Wildlife Biologist, with little or no knowledge of the behavior of pack goats, is just as much an "opinion" as that of a pack goat owner stating that the risk of pack goats contacting bighorn sheep is "low" to "very low." Indeed, as long-time pack goat owner and user, I am just as qualified in pack goat behavior as a wildlife biologist is in the behavior of bighorn sheep. Yet, my comments are dismissed as "General comment, opinion or position statement," while the professional opinions of Wildlife Biologists are considered critical to the decision-making process. Please explain this discrepancy. And please elaborate the credentials of "J. Dirks," who has personal communication with Wildlife Biologist Joe Harper, in 2011, nearly 8 years ago, while discounting much more current opinions from the Pack Goat Community.

The Response to my comments (189,190,208, and 209) with the following: "General comment, opinion, or

position statement" does not acknowledge the subjectivity of the qualitative risk analysis in the RADT.

* Provide the rationale/documentation for the definition of "moderate risk" of contact and analyze Pack Goats separately in this analysis. "Moderate" risk of contact in the qualitative analysis in the RADT is completely subjective and biased towards a pre-decisional outcome (RADT p22). In addition, the RADT continues to lump lack goats with domestic sheep and goats. The link between contact & actual disease transmission has been inadequately illustrated, with respect to pack goats. Contact does not equal disease. Please explain the rationale for the conclusion of "moderate risk of contact" and its relation to actual risk of disease transmission from pack goats to bighorn sheep, given the fact/data that pack goats carry such insignificant levels of the MOVI pathogen in the first place, the relatively few number of pack goats that would be in proximity to bighorn sheep, and the mitigation measures that would be in place when pack goats are in bighorn sheep habitat.
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Assign a time frame for "future." The "Risk of Contact" section states: "A rating of 'Moderate' risk indicates that physical contact between bighorn and domestic sheep and goats may occur at some point in the future (RADT page 23)." Please assign a time-frame for "future." Please provide the rationale for making the subjective definition of "moderate risk" in the RADT.

In summary, I am requesting that you revise your Decision after doing the following:

* Analyze pack goats separately from domestic sheep and goats.
* Distinguish between "risk of contact" and "risk of disease transmission," and acknowledge the fact that pack goats are not a signifiant source of MOVI pathogens when compared with domestic sheep and goats.
* Do a quantitative, rather than a qualitative risk analysis of contact and subsequent disease transmission and analyze pack goats separately in this analysis.
* Provide rationale for defining "moderate" risk and analyze pack goats separately in this process.
* Evaluate the effectiveness of proposed mitigation measures with input from Subject Matter Experts familiar with the pack goats and their habits.
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Have the revised Risk Analysis reviewed, using qualified personnel that are experienced in the statistical science of Risk, not just Wildlife Biologists.

Finally, I am requesting a meeting to discuss and potentially resolve my objections in accordance with 36 CFR [sect] 219.57.

Sincerely, Irene Saphra

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References:

Highland, M. 2016. Domestic Small Ruminants & Wild Sheep Respiratory Bacteria and Disease Research. Presentation, University of Alaska, Fairbanks.

Highland, M. Personal Communication, email dated 1/22/18 (excerpt): "Multiple laboratories did not test samples[hellip].all samples were tested in my laboratory with duplicate swabs from the first sample collection tested at WADDL for confirmation of my testing. Dr. Klein does not have any sort of understanding of the data that I clearly outlined and shared with the FS. The NAHMS study has NOT been peer reviewed, no more than the packgoat study[hellip]..the NAHMS study was put out in a brief by APHIS, not a peer reviewed publication (although it is soon to be from my understanding, as messy as it was done). The number of premises per state doesn't matter in our packgoat study[hellip].we were not trying to compare states, simply test as many volunteer premises as we could. Dr. Klein is also confused about the NAHMS study and randomly throws "goats" in to the

picture. The 453 premises were sheep operations, not sheep and goat operations."

Highland, M. Personal Communication, email dated 2/10/18 (excerpt):

"As far as the test results from the pack goat study, NAPgA has the results

(laboratory reports) from the duplicate samples that were tested on the first round of nasal swabbing which were submitted to an accredited laboratory for testing (the WADDL). If she didn't want to trust the USDA-ARS-ADRU findings, certainly the

WADDL findings should be considered trustworthy based on Ms. Klein's criteria.

Multiple laboratories did not test samples[hellip].all samples were tested in my USDAARS-ADRU laboratory with duplicate swabs from the first sample collections tested at the WADDL for confirmation of my laboratory's testing. It's unclear what Ms. Klein means by "standardized testing", the WADDL is an accredited state diagnostic laboratory that uses a validated test, and my lab is a federal research laboratory within which all samples were treated, and all samples were tested the exact same using now 3 different assays (PCR and sequencing) to confirm positive and negative samples with the best accuracy possible. Ms. Klein seems to lack knowledge and/or understanding of the data that USDA-ARS-ADRU clearly outlined and shared with the FS, lending to question whether she even read the information/data provided by USDA-ARS-ADRU (Dr. Highland), as the information provided clearly stated the study design for testing. Additionally, we sampled on a volunteer basis, the number per state is irrelevant as we are not performing inter-state comparisons. In summary, if Ms. Klein didn't understand the study and results from the USDA-ARS testing, why would she not have contacted Dr. Highland at the USDA-ARS-ADRU. It would have seemed the prudent thing to do considering the fact that there is an active Congressional Appropriation that mandates the Forest Service work with ARS in matters of bighorn sheep and land management[hellip]

Ms. Klein goes on, after disregarding USDA-ARS-ADRU data from the 2016 pack goat study due to it not being in a peer-reviewed published format, to reference the NAHMS 2011 sheep study. However the M. ovipneumonaie study performed on NAHMS 2011 samples has NOT been peer reviewed, no more than the pack goat study, as the NAHMS study was published only in an intra-agency brief by APHIS, not in peer reviewed publication/journal, and that intra-agency brief simply summarizes the prevalence data as I did in my email to the Forest Service (which I sent to you from my wsu email, Irene). Why would the number of premises per state matter in the pack goat study? The study was not designed to compare states, but rather simply test as many volunteer premises and as many goats as possible from owners who volunteered for the study. Considering the number of pack goats in the Western United States, it would seem that >550 animals tested 3 serial times is significant number of animals, with or without whatever statistical analyses that Ms. Klein believes needs to be performed to validate the data that USDA-ARSADRU provided; data that was disregarded by Ms. Klein. Ms. Klein is also confused about the NAHMS SHEEP study and randomly throws "goats" in to the picture. On the 453 premises/operations tested in the NAHMS 2011 surveillance sampling, only sheep were tested; in other words Ms. Klein inaccurately states "sheep and goat operations"; perhaps some of the tested premises also had goats, but the NAHMS 2011 sample collection was on sheep operations. Based on this, all information put forth by Ms. Klein in her response is questionable, as she clearly does not understand the available data/"science" regarding M. ovipneumonaie. The testing performed on the NAHMS samples was done on just 15 animals (I'm pretty sure it was 15 not 10, as Ms. Klein states) from each of the tested flocks and was performed at the WADDL prior to January 2016. That testing was funded by USDAARS-ADRU, under Dr. Don Knowles as the research leader. Dr. Knowles recently requested that his name and USDA-ARS-ADRU be withdrawn from any acknowledgment or authorship on a manuscript that is being considered for peerreviewed publication, and asked for the USDA-ARS-ADRU funded data be deemed unusable based on the fact that the WADDL PCR that was being used prior to January 2016 (PCR assay published in PlosOne, 2014, authors Ziegler, et al. (last author Besser)) iss not specific for M. ovipneumonaie, but rather also detects at least one other (at the time

unrecognized, and to date uncharacterized) bacterium. Highland/USDA-ARS-ADRU currently refers to this bacterium as "Mc-l" and Highland's laboratory has found it in 15%+ of the goats tested and in up to 10% of sheep tested in certain regions of the U.S. As per communications with Dr. Highland, WADDL's new PCR no longer has this false positive problem, since redesigning in January 2016, based on comparisons of hundreds of duplicate swabs tested in the WADDL and in her USDA-ARS-ADRU laboratory. In summary, if "there should be reservation on drawing any conclusions or interpretation of the data" from the pack goat data USDA-ARS-ADRU supplied to the Forest Service, the same should hold true for the M. ovipneumonaie results from the NAHMS 2011 samples. If there are questions regarding this information, please contact either Dr. Don Knowles (dknowles@wsu.edu), who, as stated, was the acting research leader at the time of testing the 2011 NAHMS samples, or Dr. Maggie Highland (maggie.highland@ars.usda.gov).

Following comments on the NAHMS data, it looks like Ms. Klein has copy and pasted paragraphs from the NAHMS non-peer reviewed information sheet, randomly throwing the word 'goat' in here and there. It's unclear why she comments on vaccinating domestic sheep (and goats). It seems Ms. Klein just randomly threw in some data that she found as a place filler, as none of it has anything to do with whether or not ADRU/Highland's research was adequately considered.

The review then moves into "other goat diseases that may be easily transmitted via direct contact or environmental contamination, and pose a potential significant health concern to BHS". This lumps pack goats into the same group with large production operations, as if the animals are treated and managed the same. The 2009 study likely covered no pack goat premises. CLA is tested for, so if animals are confirmed negative by available testing, this can be thrown out. Sore mouth (contagious ecthyma) requires active outbreaks (like herpes simplex 1) to be contagious and unstressed adults typically do not have outbreaks. No packer would take a sick animal (one with obvious lesions of sore mouth) out in the woods, at least not a responsible one.

I find this an interesting point:

'1. Development of standardized testing protocols for health certification of domestic sheep and goats to determine disease prevalence within domestic herds. However, organisms like M.ovi and Pasteurella (Mannheimia, etc) are intermittently shed by reservoir hosts. Stress may elicit active shedding by individuals that may not be documented from on-farm herd testing. (P Klein, RADT Review)'

Something to consider: reservoir hosts can and do include wild sheep and goats, and as recently discovered, other animals (see next bolded paragraph).

New data and discovery supports the fact that NOT ONLY members of the subfamily

Caprinae (goats, sheep, muskoxen) can carry M. ovipneumonaie. To date USDAARS-ADRU and testing performed at an accredited laboratory have both identified

M. ovipneumonaie in white-tail deer and bison in the lower 48 states of the United

States. Information/data to support this statement can be provided to the Forest Service by USDA-ARS-ADRU/Highland. The testing performed to confirm these findings includes isolation of M. ovipneumonaie and PCR and sequencing of the bacterial genome from samples collected from both healthy animals (bison and deer) and animals exhibiting respiratory illness (deer). This discovery was first made in November 2017 when 2 of 4 tested white tail deer in a captive zoological setting were confirmed positive; in December 2017 the USDA-ARS-ADRU had a PCRsequence positive M. ovipneumonaie detection in the only nasal swab that they had ever tested from a bison. Subsequent investigations and communications with a DVM in the upper Midwest of the U.S. in December 2018 led ARDU/Highland to the referred accredited laboratory and the discovery that M. ovipneumonaie has been confirmed by that laboratory in white tail deer and bison (personnel communications

with the DVM case coordinator at said laboratory). Should Forest Service personnel want further detailed information to corroborate these findings they should (and are

obligated by Congressional appropriation to) contact USDA-ARS

(maggie.highland@ars.usda.gov)."

Klein, P. 2017 personal communication. RADT Review (attached to this email Objection).