

Data Submitted (UTC 11): 8/2/2019 11:00:00 AM

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Organization: Wyoming Department of Agriculture

Title: Director

Comments: Dear Mr. Whlttekiend,

Following are the Wyoming Department of Agriculture (WDA) comments regarding the High Uintas Wilderness Domestic Sheep Analysis Draft Environmental Impact Statement (DEIS).

Our comments are specific to our mission: dedication to the promotion and enhancement of Wyoming's agriculture, natural resources and quality of life. As the proposed project could affect our Industry, citizens, and natural resources it is important that you continue to inform us of proposed actions and decisions and continue to provide the opportunity to communicate pertinent issues and concerns.

The WDA supports continued domestic sheep grazing on the five allotments on the Uinta-Wasatch-Cache National Forest and five allotments on the Ashley National Forest. We offer the following comments to consider.

Hydrology

WDA strongly opposes the Hydrology section. There is a tremendous inconsistency where Utah Division of Water Quality (DWQ) data and methodology were used for taking water quality samples in the project area and where the proxy method was Interjected. The author's attempt to quantify domestic sheep Impacts on water quality by using a proxy has the potential to significantly impact the domestic sheep industry. WOA recommends the Final EIS and Draft Record of Decision (ROD) utilize existing data from DWQ and more clearly identify where more water quality data or information is needed. We would recommend all future data collected follows the DWQ regulations and policy for water quality samples.

* Page 96: "DWQ 2016 30S(b) and 303(d) assessment did not list any streams In the High Uintas domestic sheep project area for exceedances of water quality standards for nutrients (nitrogen and phosphorus)."

Comment: No streams were listed; however, page 99 develops the proxy resource indicator of direct input of nutrients and bacteria to a stream based on the number of stream crossings and length (feet). WDA recommends clarifying and Including what DWQ samples were taken In the project area.

* Page 96: "In 2009, one round of bacteria samples were collected ...in allotments on the north slope of the Uinta Mountains but not within the High Uintas domestic sheep allotments (Holt and Bechthold 2009)."

Comment: WDA reiterates domestic livestock grazing is not a point source for water quality sampling. One round of bacteria samples taken outside of the project area has little to no value to the DEIS. The results of this one time sample, In no way are an Indicator of water quality or how domestic sheep grazing may be a contributing factor. Throughout the water quality section In the DEIS, the author Implies or Incriminates domestic sheep grazing as a point source and either sampling or data collected will directly link domestic sheep to the Impairment. We provide the Environmental Protection Act definitions to ensure the future ROD clarifies the difference between Point Source and Non-point Source.

Point Source1: "The term "point source" means any discernible, confined and discrete conveyance, including but limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture."

* Page 97: "Information on wetland resources was obtained from several sources."

Comment: WDA would request more clarity to the resources used to develop and analyze the water quality section. We would support the use of existing range data found in the previous sections to integrate vegetative and streambank conditions, which are representative of the project area. Additionally, we would insist the DEIS rely more heavily on the scientifically credible, defensible methodology approved by the DWQ2 (pg. 29). The vagueness of "several sources" does not provide transparency for how the deciding officer will make the final decision in the ROD. If existing data from DWQ was collected, we recommend an evaluation and inclusion all of this information.

* Page 99: "Measurement indicators are those items that compare and contrast the effects of project alternatives. Resource indicators and measures used in this analysis to measure and disclose effects are shown in Table 16. A review of literature indicates that most environmental concerns with grazing animals occur from overgrazing of vegetation, soil trampling and compaction, and soil erosion that may result in sediment entering streams. No direct water quality data has been collected within the allotments from the impacts of sheep, and bank trampling and livestock stream crossing along the Sheep Driveway are used as a proxy from impacts from sheep to water quality. This measure is used because these are the areas where sheep concentrate when crossing streams and it may also reflect public and wildlife use. The USEPA lists bank erosion as a measure of channel structure as an indirect measure of sediment (2017 USEPA)."

1 <https://19january2017snapshot.epa.gov/nps/what-nonpoint-source.html>

2 <https://documents.deg.utah.gov/water-quality/monitoring-reporting/integrated-report/DWQ-2019-005601.pdf>

Comment: As previously stated DWQ has existing credible, defensible methodology for determining water quality conditions. The implementation of a proxy to disclose effects for sheep trailing across streams with "no direct water quality data" is incredibly concerning. WDA does not support using a proxy or subjectively estimating a potential number of crossings using ArcGIS as desk exercise to develop a multiplier. We recommend working closely with DWQ, Utah Department of Agriculture and Food, conservation districts, or others with expertise in the collection of scientifically credible, defensible water quality data. Additionally, we insist including the existing data collected in the riparian section to indicate the current conditions for channel and bank structure of streams.

* Page 99: "Stream bank trampling is used as a proxy for water quality because bank trampling can result in soil erosion and sediments can carry nutrients with them to streams. Heavy loads of suspended solids in water can reflect erosion from pastures and areas of heavy use by grazing animals."

Comment: We are concerned the DEIS has no ability to quantify if soil and sediment has entered the stream or if in fact nutrients are also carried as a result of crossing the stream one time. Again, we cannot support this proxy methodology, but rather insist utilizing existing range and riparian data until additional scientifically credible, defensible water quality data is collected.

* Page 99: "Number of livestock stream crossings was also chosen as a proxy for water quality by providing an indication of the number of places where livestock concentrate when they cross streams where there may be sedimentation, and thus direct input of nutrients and bacteria to a stream."

Comment: WDA insists clarity regarding the sheep driveway and the number of crossings, number of sheep, season when the crossings occur, etc. which should already align with Annual Operating Instruction, trailing management plan, and direct communication with grazing permittees.

* Page 100: "For water quality, the amount of stream banks trampled by livestock is used as an indicator of the amount of sediment that could enter a stream due to soil erosion in the trampled area. The amount of stream banks trampled by livestock is also used as an indicator of where sheep would concentrate when they are near

streams and is assumed to reflect the area where bacteria would enter streams."

Comment: The DEIS states "It is difficult to distinguish what individual use may have impacted the individual crossing (p.100)," yet this statement clearly identifies livestock as the point source for a possible exceedance of sediment. The other concern is the use of "assumed." WDA cannot support risking the livelihoods of these permittees on the USFS basing their decision on an assumption. WDA recommends heavily revising the Hydrology section and remove subjective statements not based on DWQ methodology.

* Page 100: "To estimate the magnitude of impact to water quality (sediment nutrients, bacteria) of livestock grazing, comparisons of the amount of trampled stream banks along the sheep driveway are made between alternatives and to the total length of streams in the project area."

Comment: "Magnitude" indicates there's a substantial, quantifiable, environmental concern where livestock grazing is a point source for sediment, nutrients, and bacteria. WDA questions how the USFS will measure the magnitude and how to calculate how much sediment, nutrients, and bacteria are directly deposited throughout the sheep driveway, inside the project boundary, and of course downstream. WDA recommends removing this statement in its entirety.

* Page 100: "The amount of trampled stream banks in the allotments is obtained from data and descriptions documented in soils and hydrology field reports, range reports, and measured from imagery on Google Earth (Condrat 2018a)."

Comment: The DEIS starting on page 57 provides three resource indicators for riparian conditions, 1) percent ground cover, 2) dominance of high and moderate high plants for watershed protection, and 3) Percent late seral vegetation. If range reports were used as indicated above, WDA would support the hard data over using a proxy "measured from Imagery on Google Earth." The time the image was taken, in relation to pre or post grazing/trailing, including rest rotations cannot be extracted from Google Earth. Finally, Google Earth does not qualify for scientifically credible, defensible data. WDA insists any place where Google Earth was used in the analysis is removed.

* Page 100: "Trampled stream banks are indicated in bare soil and laid back stream banks at stream crossings or trampling that shows hoof prints along the stream banks by livestock."

Comment: The statement assumes all stream crossings contain the same soil, exposed banks, lacking any cobble or rock, or vegetation. Again, simply based on the statement above, the DEIS identifies livestock grazing as a "point source" and definitively differentiates livestock grazing from all other recreation users, wildlife, and administrative use. We recommend reviewing and implementing the range reports for more information on stream bank conditions.

* Page 100: "Water quality data from samples collected outside of the allotments but within the same watersheds are presented and the Utah Division of Water Quality assessments of how water from these drainages are meeting their beneficial uses are described to show the overall water quality of water draining from the allotments."

Comment: While WDA appreciates the inclusion of DWQ data, the statement once again, misleads the reader to believe a single domestic livestock use or trailing event across the identified stream in the project area will show measurable changes in sediment, nutrients, or bacteria. The statement dismisses any contributors such as recreation throughout the forest (hiking, horseback riding, etc.).

* Page 100: "Water quality information was obtained from the Utah Division of Water Quality and from Forest Service bacterial field samples."

Comment: We understood from page 99, "No direct water quality data has been collected within the allotments from the Impacts of sheep, and bank trampling." The contradictory interchange between authors, use of or lack of data, methodology, and need for proxy indicators are evident throughout this section, thus substantially weakening the analysis. WDA recommends reviewing and revising the entire DEIS for a more consistent analysis and DROD.

* Page 100: "The information is adequate for assessing the environmental effects of the proposal. Most of the bank trampling is along the Sheep driveway and although the stream crossings are used by horses, wildlife, hikers, the driveway is also the main travel route of sheep through the allotments. It is difficult to distinguish what individual use may have impacted the individual crossing. Not all stream crossings were reviewed and inspected on the ground."

Comment: WDA strongly disagrees with the statement indicating the Information is adequate. The USFS admits they are unsure of the cause and should not generalize or come to assumptions. We believe the DEIS should clearly state there is no data, there's no proof, and therefore cannot make assumptions.

* Page 101: "The temporal scale for direct and Indirect water Impacts is two years based on the estimated beneficial vegetation growth in riparian area." Our results suggest that in high-elevation meadows, removing livestock-either with fences or through complete exclusion-is beneficial for riparian vegetation growth, and such benefits are evident after only two years of rest. "As vegetation recovers in riparian areas, soil erosion decreases from bare soil areas."

Comment: The range data used from pages 57 - 75 indicates the stream bank stability is 90% of potential throughout the project area across the majority of the streams, while concurrent with livestock grazing. We do not support referencing a study where no grazing or fence enclosures are used to determine a two year timeline for ensuring soil erosion decreases. This study excludes all other contributors to possible erosion, including but not limited to beaver dams and breaching of those dams. WDA recommends using the range report data.

* Page 102: "The streams have high bank stability with minimal impacts from livestock. Wetlands appear to have similar conditions as the WCNF but no sheep driveways are present."

Comment: We reiterate our previous comment relating to the contradictory interchange between authors, use of or lack of data, methodology, and need for proxy indicators.

* Page 104: "There is minimal impact to wetland and riparian areas and to water quality occurs from hiking trails since there are few stream crossings in each allotment that result in a limited amount of impact along the streams. Additionally, the hiking trails are distributed throughout the allotments which reduces the amount of sedimentation at any one point."

Comment: The statement is biased. The inconsistent approach to analyzing recreational use, including hiking and its impact to the project area is evident throughout the document. See also pages 109 and 125 comments below. WDA insists reviewing and revising the DEIS throughout for numerous inconsistencies and biased statements.

Soils

* Page 109: "Most of the sheep driveway stream crossings are located in the same place as hiking trail stream crossings. Hiking trails are at the same stream crossing location as the sheep driveway except at three crossings..."

Comment: We understand the project area is a popular recreation site for hikers, backpackers, horseback riders, and others. The high use of the stream crossings by multiple users throughout the summer, makes attempting to unilaterally correlate soil erosion with domestic sheep trailing in the analysis more unclear and inappropriate. Review and revise for consistency and scientific information.

* Page 109: "There is minimal impact to wetland and riparian areas and to water quality occurs from hiking trails since there are few stream crossings in each allotment that result in a limited amount of impact along the streams. Additionally, the hiking trails are distributed throughout the allotments which reduces the amount of sedimentation at any one point."

Comment: The statement is biased. The proxy indicator for stream crossings is a measurement for width, multiplied by the number of crossings. However, just because hikers use less width, the analysis is biased because it is not taking into consideration the number of times the creek is crossed throughout the summer, possibly every day, by numerous groups, in both directions. WDA strongly suggests ensuring the FEIS and DROD are more neutral and considers more than the true differences in impacts between a single crossing per grazing season with sheep and the multiple crossings by recreation users.

* Page 125: "Human foot traffic has less impact on trails and streambanks than livestock, but the hydrologist data indicates foot traffic would maintain five-foot wide stream crossing sites."

Comment: Again, the statement is overtly biased. WDA would request the data to defend this statement. The author is clearly not aligned with the hydrologist data, which as indicated, is non-existent. If there is scientific, quantifiable data, we would encourage the DEIS include it.

Wildlife

* Page 131: "The domestic sheep diet consists of forbs, grasses, and some woody vegetation such as young aspen sprouts (DeByle 1985 and Jensen et al. 1972). Sheep primarily consume forbs, grasses to a lesser extent, and incidentally use willows and aspens as forage (Cameron and Huber 2017)."

Comment: There are three references, one is forty-seven years old, to identify what domestic sheep eat. The following sentence referencing USFS staff contradicts the use of young aspen. This is again found later in the document. WDA recommends utilizing the most up-to-date scientific references and in cohesion with other resource sections.

* Page 131: "The removal of all domestic sheep grazing from the allotments may provide a beneficial effect to snowshoe hare by removing competition for forage."

Comment: The statement assumes there is a direct overlap with snowshoe hare and the hare population is limited by the food source. If both uplands and riparian desired conditions are in satisfactory condition, WDA does not support statements indicating the removal of domestic sheep will equate to beneficial effects. Revise or remove the statement.

* Page 132: "Because the amount of forage overlap between hare and domestic sheep is minimal, sheep grazing does not cause vegetation cover types to change, and the allotments are in satisfactory condition (Cameron 2017) and Huber 2016), removing sheep may not show any measurable benefits to hare or lynx."

Comment: This sentence directly contrasts with the previous statement and more realistically links forage overlap or lack thereof between domestic sheep and snowshoe hare.

* Page 133: "Alternative 1 would not directly or indirectly affect, or result in cumulative effects to lynx or its prey. It

may provide negligible beneficial effects to snowshoe hare by increasing its forage, but these negligible effects may not result in beneficial effects to lynx."

Comment: Another version of interpretation trying to correlate domestic sheep grazing and hare to forage. WDA recommends reviewing and revising the section for consistency of resource analysis.

* Page 144: "The pathogen (*Mycoplasma ovipneumonia*) has been detected in all five herds and is thought to be contributing to disease (bronchopneumonia) in the herds (USDA Forest Service 2019)."

Comment: If all five bighorn herds are positive for pathogens, the likely interchange of these pathogens between the herds and bighorn sheep individuals is highly likely. Removal of domestic sheep from the allotments would not alleviate the fact that the bighorn herds carry the pathogen regardless of domestic sheep presence.

* Page 145: "The ROC model was run separately for summer and winter allotments since the time period which domestic sheep are on summer and winter allotments are different, and since BHS use the landscape differently during winter and summer."

* Page 149: "The results of the model also indicate a cumulative ROC of 0.476 for the remaining SLM allotments/private lands (USDA Forest Service 2019)."

Comment: WDA believes removal of domestic sheep from forest service allotments could result in grazing permittees transitioning their sheep grazing to private pastures full time. Much of the private lands fall in the ROC model analysis area. Removal of domestics from forest service allotments does not equate to grazing permittees eliminating sheep from their operations or eliminating the risk of contact to the bighorn sheep.

* Page 155: "Although the overlap poses a "high" ROC of BHS with four Forest Service domestic sheep allotments, it is unknown how many times a BHS would need to contact a domestic sheep allotment (or lands with domestic sheep use) for interspecies contact to occur. But when interspecies contact does occur, it is likely to result in pathogen transfer to BHS (USDA Forest Service 2019)."

Comment: As previously stated, it's irrelevant when all five bighorns test positive for existing pathogens, the interspecies contact does not increase the likelihood of pathogen transfer. Vague references by "USDA Forest Service 2019" lack scientific merit and the ability for anyone to review the reference or data. We urge the USFS to reconsider how these vague references are used to defend the ROD.

* Page 156: "At present, four allotments overlap the Core Herd Home Range and as such are considered to have a high ROC; two allotments have a moderate ROC, and four allotments have a low ROC."

Comment: The ROC model is run based on existing bighorn herd locations in relation to outer boundary with domestic sheep grazing allotments. The original 1983 Bighorn Reintroduction Plan identified the risk and close proximity of the translocation of bighorns to historic and active domestic sheep allotments. The domestic sheep allotment boundaries have not changed well before the reintroduction of bighorns occurred. WDA requests the USFS run the ROC model on the original translocation sites. The results of the ROC model from 1983 and current, likely yield the same results.

* Page 157: "Although desired conditions would be achieved under the proposed action, withdrawing livestock grazing from the allotments would allow wildlife to utilize vegetation that would have otherwise been removed by livestock. Thus, wildlife may benefit by withdrawing livestock from the allotments."

Comment: The inconsistent use of "withdrawing" versus "discontinuing" versus "removing" domestic sheep grazing is evident throughout the document. Revise. Additionally, desired conditions for vegetation would not be

achieved or meet satisfactory condition if livestock removed vegetation. Moderate use of vegetation by domestic livestock does not equate to wildlife going without food or shelter.

* Page 159: "Grazing can also suppress aspen regeneration, which can alter the ability of an aspen forest to provide suitable goshawk nesting habitat. (Graham et al. 1999). However, domestic sheep do not typically browse aspen and thus aspen are unlikely to be affected by continued grazing of the allotments (DeBayle 1985)."

Comment: See page 131 for previous comments based on domestic sheep grazing browsing aspens. The DEIS has contradictions throughout different sections and scientific references.

* Page 161: "However as stated earlier, it is unknown how many times a BHS would need to contact a domestic sheep allotment for interspecies contact to occur. But when Interspecies contact does occur, it is likely to result in pathogen transfer to BHS (USDA Forest Service 2018)."

* Page 161: "If pathogen transfer does occur, the severity of disease outbreak is relatively uncertain, and the level of risk to viability under this alternative is difficult to predict."

Comment: See pages 144 and 155 for previous comments stating the Irrelevance of analyzing pathogen transfer, when bighorns already have pathogens and likely are-exposed to pathogen transfer on a daily basis between other bighorns.

* Page 161: "Habitat is in good condition and does not appear to be a limiting factor for these herds (USDA Forest Service 2018). These herds have persisted for more than 30 years, and persisted in the presence of disease for the last 25 years, which may indicate these herds have been somewhat resilient to disease (USDA Forest Service 2018). Additionally, these BHS herds have persisted concurrent with domestic sheep grazing of the 10 allotments. However, the apparent persistence of these herds may be due, in part, to the UDWE periodically augmenting herds and introducing new herds into the Uintas (USDA Forest Service, 2018)"

Comment: The statement insinuates the first five years were disease free, but due to domestic sheep grazing the bighorn were exposed to pathogens. Do we know the translocated bighorns did not already have pathogens? The paragraph above, completely disregards any efforts of domestic sheep herders and grazing permittees to ensure separation and thus persistence of BHS over the past 30 years. These may occur from livestock herders, guard dogs, best management practices, rotational grazing, etc. We insist including these in the paragraph.

* Page 164: "Cumulative impacts to wildlife include wildfire, firewood gathering, prospecting, camping, hiking, hunting, fishing, horseback riding, sightseeing, and wildlife viewing."

Comment: We recommend reviewing all cumulative recreation impacts in the same manner. This list is much more comprehensive and captures the true increase in recreation. See also page 190.

Fisheries and Aquatics

* Page 182: "The 2016 UDWQ integrate report for water quality lists the East Fork Smiths Fork, Blacks Fork, Henry's Fork, Rock Creek, Lake Fork, and Yellowstone drainages as fully supporting beneficial uses for coldwater fisheries."

Comment: This statement indicates there are no water quality issues regarding coldwater fisheries. We recommend consistently integrating this report to the Water Quality section on page 95.

* Page 183: "Aquatic macroinvertebrate samples were collected in Rock Creek, Lake Fork River, Yellowstone River and Uinta River in 2014. The results of these samples provided an estimated BCI of 87, 92, 78, and 83 respectively. This indicates good water quality and aquatic ecosystem conditions within the drainage upstream."

Comment: This is another example where using DWQ scientific methodology is used to test for water quality. We encourage this data is used in the water quality section, rather than a proxy indicator.

* Page 184: "For channel stability, stream bank trampling is used as an indicator of water quality because it can cause sedimentation of streams that can carry nutrients with it. Heavy loads of suspended solids in water can reflect erosion from pastures and areas of heavy use by grazing animals. Number of livestock stream crossings and length of unstable streambank are measures that were chosen because they give an indication of the amount of impact from areas where livestock concentrate that would likely have sedimentation, direct input of nutrients and bacteria to a stream."

Comment: The statement is integrating the proxy indicator for water quality to determine channel stability, and completely ignores any of the range monitoring data from "Resource Indicator and Measure 3, Greenline Vegetation: Percent Late Seral Vegetation."

* Page 187: "Grazing would be phased out over two years under this alternative. After domestic grazing was removed, it is expected that improvements would occur over four to five years in wetlands and streams for areas showing impacts from grazing."

Comment: The inconsistent use of "withdrawing" versus "discontinuing" versus "removing" domestic sheep grazing is evident throughout the document. Revise for consistency.

* Page 190: "Recreational activities of various kinds span the allotments, and recreation use is increasing as the visitor populations grow. The assessment of cumulative effects on recreation resources notes that this high level of recreational use is generating impacts on natural resources as well as on recreation itself. These include impacts on riparian areas due to establishment of dispersed camp sites and general foot, horse, and vehicle traffic (in areas outside the Wilderness on the UWCNF). This intersects and contributes cumulatively to similar impacts due to grazing along sheep driveways as the same trails are used. The number of hiking trail stream crossings in each allotment ranges from four to 24. From field observations during field reviews in the project allotments, stream crossings along hiking trails are about five feet wide. Using this value for the length of stream trampled at each hiking trail stream crossing outside of the sheep driveway ... "

Comment: Is this section supposed to be under fisheries? Fisheries cumulative impact needs to resemble page 164. The entire paragraph is confusing. Is the analysis inclusive of hiking impacts with in the sheep driveway, and additional impacts outside of the driveway? The inconsistent analysis of hiking impacts is seen throughout the document. See also page 104.

In conclusion, we are concerned the DEIS does have some significant analysts issues. As a Cooperating Agency we would request working closely with us to resolve these issues. We look forward to working with your staff on this project. If you have questions, please contact Justin Williams, Senior Policy Analyst at 307-777-7067.

Sincerely,

Doug Miyamoto

Director