

Comment No.	Letter 13	Response
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JACKSON HOLE WYOMING
CHAMBER OF COMMERCE

Bison & Elk MP/EIS
Laurie Shannon, Project Manager
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August 31, 2005

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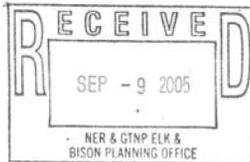
Re: Comments on DEIS Bison & Elk MP/EIS

To Whom It May Concern:

Elk and bison are the very symbols of this internationally acclaimed valley. This wildlife is at the heart of the *Power of Place* we promise to respect. The Chamber of Commerce Board of Directors represents over 830 diverse businesses throughout the region. While we are not wildlife experts, we can claim to be experts on the characteristics of a healthy economy. Two elements at the very top of the list are **watchable and huntable wildlife**. The greatest threat to this wildlife is disease. The greatest weakness in the DEIS is a solution to the threat of disease. That Teton County is one of a handful of U.S. counties that is not brucellosis free is unacceptable. Local, State and National leaders must commit the necessary time and resources to solve this problem. Another weakness in the DEIS is the gross understatement of the economic value of elk and bison or wildlife in general. In this context, we do not endorse a specific alternative; rather we express our concerns and endorse these concepts described in both alternatives #4 and #5:

- Disease Management** – Again, we stress that reduction of the risk of disease (brucellosis, CWD or unknown) is a priority concern. For both elk and bison we believe all options should be explored and considerable resources should be committed to improve vaccines or other herd management practices to attempt to reduce the risk of disease, prior to reducing supplemental feeding and herd numbers from present levels.
- Sustainable Populations** – This is related to the priority concern to reduce the risk of disease. Reduction in supplemental feeding from present levels for elk and bison should not occur until and unless there is a clear connection to reduced risk of disease, and other alternatives have been proven ineffective.
- Numbers of Elk and Bison** – We believe that elk numbers described in alternative #5 are preferred to those in #4. We appreciate that the number of bison may be growing too quickly. We are sensitive about certain methods of bison growth control or number reduction. We cannot comment further without more detailed management methods being described (e.g. hunting methods or shipping).

Respecting the Power of Place



13-1

13-1. The U.S. Fish and Wildlife Service and the National Park Service share the Chamber of Commerce's concerns that diseases are a serious threat to wildlife and understand the importance of wildlife to the economy of Jackson Hole. The Draft Plan/EIS acknowledged the serious threat that a non-endemic infectious disease represents and attempted to provide actions in the alternatives that would decrease this threat to Jackson Hole's wildlife.

The sentence on page xxi of the summary describing economic impacts was changed in the Final Plan/EIS to read, "Under the alternatives the economic impacts of changes in recreational activities (sleigh rides, wildlife viewing, and hunting) could decrease the local economy by 1% to 7%, with 7% being the worst case scenario." The section entitled "Social and Economic Impacts" (Draft Plan/EIS, pp. 447-503) analyzes impacts in detail.

13-2

13-2. The agencies agree that reduction of disease risk is a priority and believe that the best way to reduce brucellosis in the herds would be to reduce the frequency of feeding concentrations. High herd numbers at feedgrounds would continue to facilitate transmission, and current vaccines have not been very effective. Despite high vaccine delivery success, brucellosis prevalence remains high. Pouring considerable resources into creating and testing new, more effective vaccines is also not a good option. New research is limited by the decision to define the *Brucella abortus* bacterium as a controlled biological agent due to security concerns after September 11, 2001.

13-3

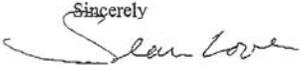
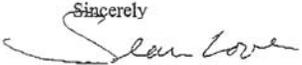
13-3. There is a clear connection between supplemental feeding concentrations and higher disease transmission (see the discussion in the Draft Plan/EIS, pp. 126-28). Peek et al. (2002) state, "The potential for diseases and parasites to proliferate where big game animals are concentrated in seasons when they are naturally in poorest condition has been understood for decades, as the Jackson Hole experience demonstrated (Murie 1951)."

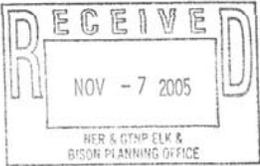
13-4

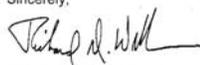
Smith (2001) notes that brucellosis is a "red flag," that "out of a million elk in North America, only those associated with the winter feeding programs in western Wyoming and adjacent eastern Idaho maintain this disease at any significant prevalence," and that feedground conditions create the perfect environment for "transmission of other, more pathogenic diseases."

13-4. The Jackson herd would be maintained at the WGFD objective of about 11,000 elk under both Alternatives 4 and 5. Numbers wintering on the refuge would be

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13-5	<p>4. Habitat Conservation – We agree with the concepts in both alternative #4 & #5 to restore habitat and improve forage. However, we believe that present supplemental feeding practices should continue, not be “phased back,” except as qualified by our comments above, items 1&2.</p> <p>5. Economic Impacts – Again, we are very concerned that the economic value of elk and bison is grossly understated. That the DEIS sets out this conclusion, underscores our concerns: “Economic Impacts. Under all alternatives, the economic impacts of recreation activities (sleigh rides, wildlife viewing, and hunting) would amount to less than 1% of the local economy.” This is a useless generalization. It is stated in the context of “impacts of recreation activities.” If our outfitters are the 1% affected and their businesses are 80% to 100% affected, this is totaling unacceptable. Beyond recreation, consider our \$1 Billion annual real estate economy. Assume only 1% of the market invests in Teton County because of the abundant, healthy, viewable and huntable wildlife – that is a \$10 Million annual impact. Suffice it to say that we strongly encourage much greater emphasis on the economics of the alternatives in the final EIS. Until the economic impacts are far better set forth, no decrease in supplemental feeding should occur.</p>	<p>13-4 (cont.), somewhat smaller under Alternative 4 and similar to numbers wintering in recent years. Alternative 4 (the Preferred Alternative in the Final Plan/EIS) has been modified to emphasize adaptive management. It does not specify the number of years that feeding would take place nor that it would be eliminated. Instead, it focuses on achieving the desired conditions for sustaining bison and elk populations over time. Working in close cooperation with the Wyoming Game and Fish Department, the U.S. Fish and Wildlife Service would decrease the need for supplemental feeding on the refuge based on existing conditions, trends, new research findings, and other changing circumstances.</p> <p>13-5. Thank you for your comments.</p>
13-6	<p>We appreciate the public outreach your office pursued in developing the DEIS alternatives, and this opportunity to comment.</p> <p>Sincerely  Sean Love, President 6750</p> <p>Cc: Governor Freudenthal; Senator Thomas; Senator Enzi; Representative Cubin; Manager NER Barry Reiswig; GTNP Superintendent Mary Gibson Scott; BTNF Supervisor Kniffy Hamilton; Mayor Barron; Commissioner Darwiche; President Wyoming Outfitters Assoc.; JH Conservation Alliance; JH Chamber Board of Directors</p>	<p>13-6. See responses 13-1 and 13-4 above. The agencies believe that reducing the Jackson elk herd to WGF’s herd objective levels would still allow for plentiful opportunities for wildlife viewing and hunting. While the agencies understand the concerns expressed about any decreases in income to local businesses, the potential consequences of a non-endemic disease such as chronic wasting disease spreading in feedground elk could result in a greater impact to the community. The agencies are committed to working cooperatively with the Chamber of Commerce and others to ensure that opportunities for wildlife viewing and hunting are continued.</p>
13-7	<p>We appreciate the public outreach your office pursued in developing the DEIS alternatives, and this opportunity to comment.</p> <p>Sincerely  Sean Love, President 6750</p> <p>Cc: Governor Freudenthal; Senator Thomas; Senator Enzi; Representative Cubin; Manager NER Barry Reiswig; GTNP Superintendent Mary Gibson Scott; BTNF Supervisor Kniffy Hamilton; Mayor Barron; Commissioner Darwiche; President Wyoming Outfitters Assoc.; JH Conservation Alliance; JH Chamber Board of Directors</p>	<p>13-7. Thank you for your comments.</p>

Comment No.	Letter 14	Response
<p>14-1</p> <p>14-2</p> <p>14-3</p> <p>14-4</p> <p>14-5</p>	<p>Don't Expand</p>  <p>"MCD" <mcd@tctwest.net> 11/07/2005 11:45 AM</p> <p>To: <bisonelk_planning@fws.gov> cc: "Clara Mae Yetter" <bert@tctwest.net>, "Craig Geving" <cgeving@tctwest.net>, "Jim Gould" <jimmy@tctwest.net>, "Ken Beer" <lefty1@tctwest.net>, "Tracy Renner" <forrenners@tctwest.net> Subject: Draft Bison and Elk Management Plan and Environmental Impact Statement</p> <p>Subject: Draft Bison and Elk Management Plan and Environmental Impact Statement</p> <p>The Meeteetse Conservation District supports Alternative 5 for the Bison and Elk Management Plan and Environmental Impact Statement.</p> <p>This is because Alternative 5:</p> <ul style="list-style-type: none"> • Best provides protection for the forage base used by all ungulates. • Best provides revenues to the State. • Best supports the local economies. • Is the Best Management Practice for sustainable yield and use of the big game resource by the public. <p>Furthermore, the Meeteetse Conservation District:</p> <ul style="list-style-type: none"> • Opposes Alternative 1 • Opposes Alternative 2 • Opposes Alternative 3 • Opposes Alternative 4 • Opposes Alternative 6 <p>Respectfully submitted,</p> <p>Steve Jones, Resource Management Coordinator Meeteetse Conservation District 2103 State Street Meeteetse, WY 82433</p> 	<p>14-1. Thank you for your comments. In the Final Plan/EIS the Preferred Alternative was modified to allow greater flexibility in management. It emphasizes collaboration with the Wyoming Game and Fish Department and would include development of a dynamic framework, which would be based on existing conditions, trends, new research findings, and other changing circumstances, for decreasing the need for supplemental feeding. It does not specify the number of years that feeding would take place. Instead, it focuses on achieving the desired conditions for sustainable bison and elk populations over time. These desired conditions have been clarified in the Final Plan/EIS.</p> <p>14-2. Alternative 5 would artificially concentrate bison and elk on the refuge and would cause major damage to woody vegetation on the refuge, which would reduce the forage base for all ungulates. Fencing to prevent continued damage to select areas on the refuge would benefit birds and small mammals but would also exclude deer and moose from using these areas. In addition, continuing to have elk numbers as high as 7,500 would increase impacts on the refuge in areas that were not fenced. Having fewer elk on the refuge, along with planned forage enhancements, would protect more forage on the refuge in the long term.</p> <p>The Draft Plan/EIS acknowledged that some alternatives that would reduce supplemental feeding on the refuge might increase competition in some areas during some years, but the extent of the impacts cannot be accurately predicted for the following reasons. First, only some of the elk that have wintered on the refuge would likely disperse, but the exact number is unknown. Improvements to refuge forage production would provide better quality forage and potentially limit early dispersal. Second, ungulates often differ in habitat choices and may remain separate by choice in wintering areas. The Jackson Interagency Habitat Initiative efforts to improve winter and transitional range for all ungulates on forest lands would likely provide additional forage in many areas, thus decreasing competition. In addition, deer, moose, and bighorn sheep populations in this area have been declining for unknown reasons, while feedgrounds have restricted the winter elk distribution. More research is needed to determine the causes for these population declines.</p> <p>14-3. The National Park Service and the U.S. Fish and Wildlife Service believe that healthy and sustainable elk and bison populations would provide the best revenue protection over the long term and that Alternative 5 would not be sustainable because of disease issues.</p> <p>14-4. The agencies believe the consequences of not taking any action to reduce the risk of serious non-endemic diseases could have a greater impact to the elk herd and to the hunting community in the long term.</p> <p>14-5. Thank you for your comments.</p>

Comment No.	Letter 15	Response
<p style="text-align: center;">62</p> <p>15-1</p>	 <p style="text-align: center;">UNITED STATES ANIMAL HEALTH ASSOCIATION 8100 THREE CHOPT ROAD, SUITE 203 • P.O. BOX K227 RICHMOND, VIRGINIA 23288 (804) 285-3210 FAX (804) 285-3367 E-Mail: usaha@usaha.org Web Site: www.usaha.org</p> <p>October 25, 2005</p> <p>Bison and Elk Management Planning Office National Elk Refuge PO Box 510 675 E. Broadway Jackson, WY 83001 Bison/elk_planning@fws.gov</p> <p>RICHARD D. WILLER PRESIDENT ARIZONA DEPARTMENT OF AGRICULTURE</p> <p>BRET D. MARSH PRESIDENT-ELECT INDIANA STATE BOARD OF ANIMAL HEALTH</p> <p>LEE M. MYERS FIRST VICE-PRESIDENT GEORGIA DEPARTMENT OF AGRICULTURE</p> <p>JAMES W. LEAFSTEDT SECOND VICE-PRESIDENT NATIONAL PORK BOARD</p> <p>DONALD E. HOENIG THIRD VICE-PRESIDENT MAINE DEPARTMENT OF AGRICULTURE</p> <p>J. LEE ALLEY SECRETARY</p> <p>J. W. BRYAN TREASURER CLEMSON UNIVERSITY</p> <p>Reference: comments on the Draft Bison/Elk Management Plan and Environmental Impact Statement (Plan/EIS) for the National Elk Refuge (NER) and Grand Teton National Park (GTNP)</p> <p>The following comments are submitted on behalf of the United States Animal Health Association (USAHA), the nation's animal health forum since 1897. USAHA addresses animal disease related issues, both in domestic animals and wildlife, as well as issues related to food safety, public health, and homeland security. By serving as a clearinghouse for new information and methods, USAHA acts to develop solutions on these issues based on science, new information and methods, public policy, risk/benefit analysis and the ability to develop consensus for changing law, regulations, policies and programs. USAHA membership includes 65 state, federal and international animal and public health agencies, 31 allied animal agriculture industry and professional organizations, and over 1,200 individual members representing academia, animal owners and animal health professionals including wildlife health experts.</p> <p>USAHA supports Alternative Management Plan 6 as detailed in the Plan/EIS with slight enhancement. USAHA supports this alternative's focus on restoration of habitat, adaptively managing animal populations and habitat, and the reduction of numbers of elk and phase-out of supplemental feeding on the NER. USAHA supports the elimination of supplemental feeding in order to reduce the opportunities for transmission of brucellosis as well as other serious diseases between and among bison and elk, and that have the potential for spillover into livestock and even people. Congregation of animals, whether artificially or naturally, leads to increased disease transmission in the animal population and inhibits sustaining a healthy animal population. Elimination of congregation of animals is in keeping with Management Goal 4, disease management.</p> <p>USAHA urges the enhancement of Alternative 6 by providing for vaccination of elk with brucellosis vaccine strain 19 and bison with brucellosis vaccine strain RB51, even though efficacy may be less than 50%. Because there is some evidence that use of strain 19 has reduced the prevalence of brucellosis in elk in some areas in spite of reduced efficacy, and that RB51 does show efficacy in bison, in the absence of alternative vaccines, these vaccines should be used in elk and bison until vaccines with higher efficacy are developed.</p> <p>Sincerely,</p>  <p>Richard D. Willer, DVM President</p>  <p>109th Annual Meeting – Hershey Lodge and Convention Center – November 3–10, 2005</p>	<p>15-1. Thank you for your comments. In the Final Plan/EIS the Preferred Alternative was modified to allow greater flexibility in management. It emphasizes collaboration with the Wyoming Game and Fish Department and would include development of a dynamic framework, which would be based on existing conditions, trends, new research findings, and other changing circumstances, for decreasing the need for supplemental feeding. It does not specify the number of years that feeding would take place. Instead, it focuses on achieving the desired conditions for sustaining bison and elk populations over time. These desired conditions have been clarified in the Final Plan/EIS.</p>
<p>15-2</p>	<p>USAHA supports Alternative Management Plan 6 as detailed in the Plan/EIS with slight enhancement. USAHA supports this alternative's focus on restoration of habitat, adaptively managing animal populations and habitat, and the reduction of numbers of elk and phase-out of supplemental feeding on the NER. USAHA supports the elimination of supplemental feeding in order to reduce the opportunities for transmission of brucellosis as well as other serious diseases between and among bison and elk, and that have the potential for spillover into livestock and even people. Congregation of animals, whether artificially or naturally, leads to increased disease transmission in the animal population and inhibits sustaining a healthy animal population. Elimination of congregation of animals is in keeping with Management Goal 4, disease management.</p> <p>USAHA urges the enhancement of Alternative 6 by providing for vaccination of elk with brucellosis vaccine strain 19 and bison with brucellosis vaccine strain RB51, even though efficacy may be less than 50%. Because there is some evidence that use of strain 19 has reduced the prevalence of brucellosis in elk in some areas in spite of reduced efficacy, and that RB51 does show efficacy in bison, in the absence of alternative vaccines, these vaccines should be used in elk and bison until vaccines with higher efficacy are developed.</p> <p>Sincerely,</p>  <p>Richard D. Willer, DVM President</p>  <p>109th Annual Meeting – Hershey Lodge and Convention Center – November 3–10, 2005</p>	<p>15-2. Because these vaccines are safe for use in elk and bison, safe for non-target species, and may reduce brucellosis transmission to some degree, the Preferred Alternative could incorporate vaccination as long as it was logistically possible. Management would not be designed or changed specifically to facilitate vaccination.</p>

Comment No.

Letter 16

Response



ANIMAL
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INSTITUTE

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September 26, 2005

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Via U.S. Mail and E-mail <bisonelk_planning@fws.gov>

**Re: Draft Bison and Elk Management Plan and Environmental
Impact Statement for the National Elk Refuge/Grand Teton
National Park/ John D. Rockefeller Jr., Memorial Parkway**

To Whom It May Concern:

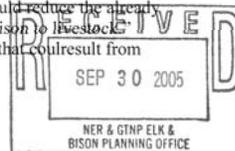
On behalf of the 85,000 members and supporters of the Animal Protection Institute, I thank you for considering these comments on the Draft Bison and Elk Management Plan and Environmental Impact Statement (EIS) for the National Elk Refuge/Grand Teton National Park/ John D. Rockefeller Jr., Memorial Parkway.

API advocates for the protection of wildlife in national parks through public awareness campaigns, lobbying, and litigation. Our organization supports the use of humane, nonlethal alternatives to resolve human-wildlife conflicts and strongly opposes lethal management of elk and bison and other wildlife. The management of our country's national parks and the wildlife who reside there is of great importance to API and our members. API is actively involved in numerous issues affecting wildlife in national parks and has monitored the status of the greater Yellowstone area bison for three decades.

API opposes the preferred alternative and supports Alternative 2 which will immediately prohibit sport hunting and therefore eliminate a force of artificial mortality that may thwart or even reverse the forces of natural selection.

In addition, Alternative 2 will phase out artificial feeding over a 15-year period, allowing herds to return to more natural size and distribution and reducing the potential for disease transmission caused by unnatural densities of bison and elk at artificial feeding stations.

The draft EIS notes that Alternative 2 would reduce the prevalence of brucellosis found in the elk and bison herds and "would reduce the already low risk of brucellosis being transmitted from elk/bison to livestock." The draft EIS also notes that the severity of impacts that could result from



16-1

16-1. Thank you for your comments.

16-2

16-2. Alternative 2 would eliminate hunting on the refuge and the elk reduction program in Grand Teton National Park. Sport hunting would continue to occur in other areas and to affect selection in the Jackson elk herd.

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	<p>the establishment of tuberculosis or paratuberculosis in the Jackson elk or bison herd would be lowest under Alternatives 2 and 6, and as a result those alternatives pose the least risk to other ungulates on the refuge.</p> <p>According to the draft EIS, Alternative 2 would benefit small mammals associated with sagebrush, shrublands, and riparian and aspen woodlands, and small mammal diversity could increase because of the more natural conditions encouraged under this alternative. Neotropical migratory birds, sage grouse, and waterfowl would also benefit from major increases in habitat and increased nesting cover.</p> <p>Finally, human health and safety risks associated with hunting accidents would be eliminated as would risks associated with hunter encounters with grizzly bears. Grizzly bear mortality resulting from shooting by elk and bison hunters would also be eliminated.</p> <p>The draft EIS admits that "Alternative 2 (along with Alternative 6) would result in higher levels of long-term health, sustainability, and naturalness in the bison herd than would occur under Alternatives 1, 3, 4, and 5." Despite this finding, the Service has selected Alternative 4 as the preferred alternative.</p> <p>API is especially disappointed that the preferred alternative (Alternative 4) allows for the continued hunting of elk and bison within the park boundaries and continues to cater to the livestock industry at the expense of native wildlife.</p> <p>We are particularly concerned about the implications of "Goal 4: Disease Management" which reads, "<i>Work cooperatively with the state of Wyoming and others to reduce the prevalence of brucellosis in the elk and bison populations in order to protect the economic interests and viability of the livestock industry, and reduce the risk of adverse effects for other non-endemic diseases not currently found in the Jackson elk and bison populations.</i>"</p> <p>This goal appears to be based solely on the unfounded concerns of livestock producers that bison and elk in and around the park could transmit Brucellosis to cattle. There are several points to be made here. First, bison and elk first contracted <i>Brucella abortus</i> through transmission by cattle. Second, there have been no documented cases of <i>B. abortus</i> transmission to cattle from bison or elk in the wild and the risk of transmission is extremely small, according to scientific evidence. Third, current vaccines for <i>B. abortus</i> are more successful for use in cattle than in bison and it would be far easier to administer vaccinations to cattle than to wild elk or bison, which begs the question as to why the preferred alternative does not immediately require mandatory vaccination of all cattle. Taxpayers already heavily subsidize environmentally harmful livestock grazing on public lands and should not be required to also pay for the vaccination of wild bison and elk to benefit private livestock interests.</p> <p>Of further concern, the impact of the preferred alternative on threatened and endangered species has not been fully evaluated.</p>	<p>16-3. Alternative 4 in the Draft Plan/EIS and as modified in the Final Plan/EIS would continue the elk reduction program in the park. Legislation that enlarged Grand Teton National Park in 1950 allowed for this program when necessary for the proper management of the elk herd (Draft EIS, p. 14; Public Law 81-787, 16 USC 673e). Bison hunting has not occurred in the park or on the refuge. It would not be allowed in the park but would occur on the refuge under Alternatives 3, 4, 5, and 6.</p> <p>The National Park Service and the U.S. Fish and Wildlife Service disagree with the statement that actions in the Draft Plan/EIS "cater to the livestock industry at the expense of native wildlife." Various actions to reduce diseases and disease risk were presented within the range of alternatives. Actions that decrease brucellosis prevalence in the Jackson bison and elk herds would benefit these wildlife populations as well as the livestock industry.</p> <p>16-4. With regard to brucellosis, elk have been strongly implicated as the source of recent brucellosis infections in Wyoming and Idaho cattle. The infected livestock herds had contact with elk fed during winter and were known to have high levels of brucellosis compared to un-fed elk from other areas. The type of brucellosis agent discovered when analyzed was the same as that found in the elk. All cattle herds where brucellosis transmission occurred were vaccinated animals; some were twice vaccinated, including both Strain 19 and the newer RB51.</p> <p>Current vaccines for <i>Brucella abortus</i> are being used in cattle. Vaccination is mandatory for all sexually intact female cattle except nursing female calves within the boundaries of the Bridger-Teton, Shoshone, and Targhee national forests within Wyoming. Effectiveness ranges from 60% to 70%, and the concentration of the contact bacteria also affects the likelihood of infection. Vaccines are less effective in bison and elk but could cause modest reductions in abortion (Draft Plan/EIS, pp. 276, 286; Wyoming Brucellosis Coordination Team 2005) and risks for transmission within the wildlife herds, between bison and elk, and between elk and/or bison and cattle. Some research results and recent prevalence levels in a long-vaccinated feedground elk herd make the field effectiveness of current vaccines questionable. Such programs may not be cost-effective until higher efficacy vaccines are available.</p> <p>16-5. See next page.</p>
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Comment No.	Letter 16 (cont.)	Response
16-5 (cont.)	<p>While the Service acknowledges that a determination on the impacts to threatened and endangered species must be made in order to comply with section 7 of the Endangered Species Act, it also states that the biological evaluation on the effects of the preferred alternative will not be completed until after the close of the comment period for the draft EIS, with no adequate justification for the delay/process separation.</p> <p>Consequently, the draft EIS does not allow for the adequate evaluation and consideration of the proposed alternatives. It is therefore premature for the FWS to issue a final EIS prior to a thorough assessment of the impacts to threatened and endangered species and the opportunity for public comment.</p>	<p>16-5 (cont.). Impacts on threatened and endangered species were evaluated in the Draft Plan/EIS (pp. 343–56). To comply with section 7 of the Endangered Species Act, a biological assessment of the effects of the Preferred Alternative in the Final Plan/EIS on threatened and endangered species will be written and submitted for approval to the field office for Ecological Services (U.S. Fish and Wildlife Service). There has been no “delay / process separation.” Biological assessments are typically made after the Draft Plan/EIS is revised following public comment.</p>
16-6	<p>API contends that the FWS cannot separate the impact assessment of its preferred alternative from the draft EIS. The FWS must fully analyze its preferred alternative in a revised draft EIS and re-circulate an amended version for public comment.</p> <p>CONCLUSION National Parks should provide a safe place for bison, elk, and other wildlife where they can live peacefully without being shot at or unnecessarily managed and interfered with by people. When animals wander outside the park, they should continue to receive full protection from harm. We oppose intensive management of bison and elk, especially when the aim is cater to hunting and livestock interests rather than to restore and encourage natural ecosystem dynamics that have shaped and maintained the species within the National Elk Refuge/Grand Teton National Park/ John D. Rockefeller Jr., Memorial Parkway for millennia.</p>	<p>16-6. The impact assessment of the Proposed Action was completed in the Draft Plan/EIS (pp. 197–508). The preferred alternative is not identified until the Final Plan/EIS is published. It could be the same as the proposed action or changed as a result of public comment on the Draft EIS. Unless there is a substantial change in the analysis, there is no need to recirculate an amended version for public comment. This conforms to the planning policies of the U.S. Fish and Wildlife Service and the National Park Service.</p>
16-7	<p>Bison and elk are wild species. Yet the government’s plan seeks to manage them as domestic animals. Bison once blanketed the Great Plains and should be allowed to roam, free from harassment, on the public lands inside and outside of the National Elk Refuge/Grand Teton National Park/ John D. Rockefeller Jr., Memorial Parkway.</p> <p>Thank you for the opportunity to comment on this issue, which is of great importance to our members.</p> <p>Sincerely,</p>  <p>Camilla H. Fox Director of Wildlife Programs</p>	<p>16-7. Thank you for your comments.</p>

Comment No.	Letter 17	Response
	<div data-bbox="300 251 420 370" data-label="Image"> </div> <div data-bbox="430 280 1043 324" data-label="Section-Header"> <h2 style="text-align: center;">ANIMAL WELFARE INSTITUTE</h2> </div> <div data-bbox="529 324 963 368" data-label="Text"> <p style="text-align: center;"><i>PO Box 3650 Washington, DC 20027-0150 www.awionline.org telephone: (703) 836-4300 facsimile: (703) 836-0400</i></p> </div> <p data-bbox="287 423 449 446">November 7, 2005</p> <p data-bbox="287 493 768 518"><u>BY ELECTRONIC MAIL AND OVERNIGHT MAIL</u></p> <p data-bbox="287 539 657 656">Bison and Elk Management Planning Office National Elk Refuge P.O. Box 510 675 E. Broadway Jackson, WY 83001</p> <p data-bbox="287 678 518 703">To Whom It May Concern:</p> <p data-bbox="142 738 191 763">17-1</p> <p data-bbox="287 725 1037 865">On behalf of the combined nationwide membership of the Animal Welfare Institute (AWI) and The Humane Society of the United States (HSUS), I submit the following comments on the Draft Bison and Elk Management Plan and Environmental Impact Statement for the National Elk Refuge and Grand Teton National Park¹ (hereafter Draft EIS). This letter includes brief comments on the draft compatibility determinations appended to the Draft EIS.</p> <p data-bbox="142 906 191 930">17-2</p> <p data-bbox="287 889 1037 1218">The controversy surrounding the management of elk and bison on the National Elk Refuge (NER), Grand Teton National Park (GTNP), and throughout the Jackson Hole, WY region has persisted for over 15 years. For years, the U.S. Fish and Wildlife Service and National Park Services (hereafter FWS, NPS, or the agencies) focused their efforts on developing single-species management plans for bison despite the inextricable connections between bison and elk management created by the supplemental feeding program on the NER. In its 1996 environmental assessment on the management of bison on the NER and GTNP, the FWS and NPS provided compelling evidence of the impacts of the supplemental feeding program – initiated for the ostensible benefit of elk – on the Jackson bison herd. Though warned that this interrelationship between bison and elk management justified the analysis of both issues in a single environmental document (See, 1/25/95 comments of The Fund for Animals on the Draft Long-Term Management Plan and Environmental Assessment for the Jackson Bison Herd; 11/25/96 comments of The Fund for Animals on the Final Long-Term Management Plan and Environmental</p> <p data-bbox="287 1300 1012 1343">¹ In the context of this comment letter, any reference to Grand Teton National Park or GTNP includes the John D. Rockefeller Jr., Memorial Parkway.</p>	<p data-bbox="1136 738 1484 763">17-1. Thank-you for your comments.</p> <p data-bbox="1136 906 1944 1084">17-2. The injunction issued by the court enjoined the federal defendants from the destruction of bison as outlined in the 1996 plan until they complied with the National Environmental Policy Act by preparing an environmental impact statement that encompassed the combined environmental effects of the elk and bison supplemental feeding program and the <i>Jackson Bison Herd Long-term Management Plan</i>. The Final Plan/EIS discloses the effects of a range of alternatives for the management of bison and elk, including the effects of supplemental feeding.</p>

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17-2 (cont.)	<p>Assessment for the Jackson Bison Herd),² the agencies ignored their own evidence only to have their Jackson bison management plan deemed illegal by the court (<u>See</u>, The Fund for Animals v. Clark, 27 F. Supp.2d 8).</p> <p>These events prompted the development of the current Draft EIS in which the FWS and NPS attempt to evaluate the combined impacts of bison and elk management in the Jackson Hole area³ in order to develop a comprehensive management strategy for both species.</p>	
17-3	<p>Unfortunately, the Draft EIS fails to adequately evaluate the full range of issues, impacts, and effects associated with the management of bison, elk, other wildlife, domestic livestock, and wildlife habitat within the Jackson Hole area. While the Draft EIS has considerable girth, the number of pages is not as important as the scope of the content, the quality of the information, and the accuracy of the analysis. Specifically, deficiencies in the Draft EIS include: 1) an inadequate scope of the analysis (i.e., public and private land cattle grazing); 2) a failure to disclose all relevant information and data; and 3) a failure to objectively and comprehensively evaluate the full range of environmental impacts of all alternatives. To correct these deficiencies, the agencies must, ideally, prepare a supplemental EIS to address the many inadequacies in the Draft EIS. Identifying and correcting such deficiencies in a Final EIS is not acceptable as the deficiencies are of such significance that the public must be provided with an opportunity to review and comment on a new, corrected analysis.</p>	<p>17-3. The U.S. Fish and Wildlife Service and the National Park Service believe that the range and objectivity of the analyses in both the Draft and Final EISs are adequate. The primary analysis area, as identified in the Draft Plan/EIS (p. 24), is the boundary of the Jackson bison and elk herds, and the Draft EIS disclosed all relevant information and impacts known within the primary analysis area. Under two alternatives it is possible that elk could migrate out of the primary analysis area, although it is highly speculative as to how much migration, if any, would occur. A secondary analysis area was identified to evaluate the impacts to the extent practicable if such migration took place. With respect to public and private grazing, the Draft EIS disclosed the number of cattle permitted on public land grazing allotments within Grand Teton National Park and Bridger-Teton National Forest (Table 3-15, p. 180) in addition to what is known about other public and private lands within the primary and secondary analysis areas (Draft Plan/EIS, pp. 179-81). The Final Plan/EIS was updated to include new data.</p>
17-4	<p>In addition, the format of the Draft EIS is awkward and its analysis is frequently inconsistent as if the agencies were more interested in meeting some self-imposed date for publication rather than ensuring the accuracy of the analytical content of the document. As a consequence of failing to provide a more reader-friendly format and a more understandable content, the public's ability to review and comprehend the environmental impacts of the proposed action and each alternative was hindered, thereby compromising the public's ability to submit substantive and informed comment on the Draft EIS.</p>	<p>17-4. The planning process began in 1999, and the Draft Plan/EIS was published in July 2005. A number of studies were undertaken specifically for this EIS. In addition, the agencies reviewed a large volume of scientific literature and consulted with many experts. The agencies felt that the document was at a point that the public should comment on the issues. The commenter did not identify what could have been done to provide a more "readable format," but the format used in the Draft EIS is consistent with other EIS formats. Every effort was made to consolidate and present the information in an understandable format. The Draft EIS included numerous tables, figures, and photographs, in addition to the executive summary.</p>
17-5	<p>As a result of its comprehensive analysis of the entire Draft EIS, AWI and HSUS most strongly support the adoption of Alternative 2 (the so-called "Minimal Management of Habitat and Populations, With Support for Migrations" alternative) as described throughout the Draft EIS and as amended below. This alternative would terminate elk hunting on the NER and GTNP, continue to prohibit bison hunting on the NER and GTNP, phase-out supplemental feeding on the NER within 10-15 years, allow natural factors to affect bison and elk population dynamics, phase-out irrigation practices in favor of natural vegetation, restore native grasses on all areas under cultivation, and initiate the use of immunocontraceptives to non-lethally expedite a reduction in the size of the Jackson bison</p> <p>² The Fund also informed the agencies that the management of cattle had to be considered in concert with the management of elk and bison in a single environmental document though this recommendation was and continues to be ignored.</p> <p>³ For the purpose of this comment letter, the "Jackson Hole area" includes both the primary and secondary analysis areas as defined in the Draft EIS which incorporates the GTNP, NER, lands administered by the Bureau of Land Management, U.S. Forest Service, state of Wyoming, and private lands.</p> <p style="text-align: center;">2</p>	<p>17-5. The one-page descriptions provided for each alternative in the Draft Plan/EIS on pages 40, 42, 46, 48, and 50, with each corresponding map, were intended to simplify the information and give readers an overview of each alternative and not every detail. In the Final Plan/EIS, where space allowed, additional bullets were included in the overviews to further characterize the alternative. In the Draft EIS all the specifics of the objectives and strategies for each alternative were described in detail following the overview section.</p>

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<p style="text-align: center;">68</p> <p>17-6</p>	<p>population. Because the descriptions provided of each alternative (see Draft EIS Chapter 2 at 40, 42, 44, 46, 48, and 50) did not accurately portray the specific characteristics of each alternative as disclosed throughout the Draft EIS, if the summary of Alternative 2 provided above is inconsistent with the agencies interpretation of the alternative, they must modify their description to be consistent with that summarized herein. To strengthen and improve Alternative 2, suggested amendments to this alternative would be:</p> <ol style="list-style-type: none"> 1) to emphasize and expand federal, state, and private habitat enhancement projects using all effective techniques on the NER, GTNP, and surrounding lands; 2) to emphasize and expand the restoration of more natural fire regimes through prescribed burning and, where appropriate, allowing naturally caused fires to burn without suppression efforts on the NER, GTNP, and surrounding lands; 3) establish a woodland and riparian vegetation monitoring effort including the creation of willow, aspen, and cottonwood habitat damage thresholds that would immediately initiate the construction of temporary habitat exclosures to protect threatened or overbrowsed areas within these important habitat types; 4) emphasize agency support for the restoration of both historic elk migration routes and bison movement corridors; 5) establish a ten-year time frame for phasing out the supplemental feeding program gradually reducing the frequency of feeding (based on the severity of the winter) during that time frame; 6) provide support and funding toward research to address outstanding questions regarding the safety, efficacy, feasibility, and practicality of using immunocontraceptive technologies for fertility control in bison and elk, including research to identify safe, effective, and humane vaccine delivery tools and techniques; 7) continue and expand ungulate surveillance efforts to rapidly identify the presence of any new, non-endemic disease in the Jackson bison, elk, and other wildlife populations. 	<p>17-6. with regard to points 1–7, the agencies believe that the objectives and strategies as detailed in Alternative 2 are sufficient to meet the intent of the alternative. Prescribed fire would not be used in Alternative 2 on the National Elk Refuge, but it could be used as part of the fire management program in Grand Teton National Park, as described under cumulative impacts in the Draft Plan/EIS (at the end of each impact topic). Without a specific population objective for elk and bison herds, the elimination of hunting as a management tool, and the potential for great fluctuations in the herds, temporary exclosures would not likely be effective in restoring heavily overbrowsed areas (Draft EIS, pp. 217–18). The agencies would support others in their efforts to restore or establish migration corridors, but without the support of the Wyoming Game and Fish Department, which presently oppose this option, in addition to opposition by landowners, it would be difficult to include additional emphasis within the framework of this planning process. The use of supplemental feeding would be phased out in 10–15 years. Fertility control would be used to reduce the bison population initially, and a bulleted statement was added to the overview of Alternative 2 in the Final Plan/EIS (Draft EIS, p. 42) to clarify this issue. As described in the Draft EIS, it is not practical or feasible to use fertility control on elk (p. 75). Under all alternatives, the agencies would adopt the state’s surveillance plan for chronic wasting disease (Draft EIS, p. 38) and would continue to monitor for other diseases.</p>
<p>17-7</p>	<p>Alternative 2, as amended, is the most ecologically appropriate, environmentally preferred, and scientifically sound alternative that would satisfy the legal parameters of the FWS and NPS. AWI and HSUS would also support Alternative 6 if it were amended to eliminate the initiation of a bison hunt on the NER, to allow for the use of fertility control techniques if appropriate, and to promote the reestablishment of elk migratory corridors and bison movement areas outside of the GTNP/NER complex to other public and private lands. AWI and HSUS believe that the other alternatives evaluated in the Draft EIS, including the proposed action (Alternative 4) are unacceptable because they are not scientifically justified or ecologically acceptable. Given the serious implications -- conceded by the agencies -- regarding the potential for a non-endemic disease to be introduced into the Jackson elk and bison populations, the agencies selection of Alternative 4 as the proposed action is unacceptable and biologically reckless. Alternative 4 would not significantly reduce the potential for a serious outbreak of a non-endemic disease within the bison and elk populations and could substantially and adversely impact the elk, bison, and other wildlife populations in the Jackson Hole area, thereby failing to satisfy other criteria, goals, and legal mandates as delineated in the Draft EIS. Should the agencies select</p>	<p>17-7. The alternatives in the Draft Plan/EIS present a range of options for managing the bison and elk herds within the National Elk Refuge and Grand Teton National Park. While some alternatives may meet the missions and mandates of each agency better than others, none of the alternatives are in conflict with the purposes of either the elk refuge or the national park. Where there is conflict between the mission and policies of the National Wildlife Refuge System and the purposes of a specific refuge, the purposes take priority (USFWS Director’s Order 132). Similarly, the NPS <i>Management Policies</i> provide for latitude in managing a specific national park area (NPS 2000, 2006). While Alternative 4 may not substantially reduce the potential for a serious outbreak of a non-endemic disease, given the complexity of the issues, including the social considerations and the depth of opposing viewpoints, the agencies believe that taking action to solve the issues that have been at play in Jackson Hole for over 100 years is neither arbitrary nor capricious, rather it is realistic.</p>

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17-7 (cont.)	<p>Alternative 4 as their preferred alternative, such a decision would clearly be arbitrary and capricious and would violate federal law.</p> <p>The remainder of this comment letter will identify, in appropriate detail, deficiencies in the Draft EIS.</p> <p><u>DEFICIENCIES IN THE DRAFT EIS:</u></p>	
17-8	<p><u>1. The agencies have failed to properly define the scope of the Draft EIS:</u></p> <p>As is evident from the wide range of issues addressed in the Draft EIS, the controversy, concerns, implications, and impacts associated with the short and long-term management of bison and elk in the Jackson Hole area extend well beyond bison or elk hunting, vaccination, and the differences between cultivated forage and natural vegetation. This is a complex issue that has been almost 100 years (since supplemental feeding for elk began in 1911) in the making. Its resolution will not be simple or easy and strategies designed to address the management issues cannot be limited in scope, geographically or otherwise, must not be confined by agency turf battles or politics, and must be sufficiently expansive to encompass <u>all</u> of the relevant issues (emphasis added). The Draft EIS mentions many of those issues, but for reasons that were not explained, fails to seriously address many of the most critical issues that have, in a real sense, created the existing controversy and/or that are required to develop a sensible, feasible, and legitimate solution. Those critical issues include, but are not limited to, cattle grazing on public lands (<u>i.e.</u>, GTNP, the Bridger-Teton National Forest (BTNF), and lands administered by the Bureau of Land Management (BLM)), the supplemental feeding of elk on state feedgrounds and the inexplicable resistance of the Wyoming Game and Fish Department (WGFD) to phase out feedgrounds throughout the state, and the need to restore historic elk (and bison) migration or movement corridors to restore naturalness in what is a highly artificial system.</p>	<p>17-8. The agencies disagree that the scope of analysis was not properly defined. See responses 17-3, 17-13, and 17-14 in reference to migration. The amount of cattle grazing in Grand Teton National Park is low and continues to decline, and overall grazing within the primary analysis area is on a downward trend (Draft Plan/EIS, p. 180). In 2005 there were only 160 cow-calf pairs in the national park, and some allotment acres were not used (Draft EIS, p. 180) and were not used in 2006. Some areas of critical elk habitat in Bridger-Teton National Forest are closed to cattle grazing.</p> <p>The Draft Plan/EIS acknowledged in the analysis of Alternatives 2 and 3 (pp. 263, 273) that migration to other areas would be impacted by the state feedgrounds, as some elk would likely be stopped from moving beyond the feedgrounds. At the present time, the Wyoming Game and Fish Department does not plan to phase out state feedgrounds in the foreseeable future, and the agencies do not have jurisdiction to require the department to do so.</p>
17-9	<p>The failure of the agencies to disclose the extent of, and to evaluate the impact of, cattle grazing activities throughout the primary and secondary analysis areas, particularly given the role of cattle and cattle producers in creating the hysteria associated with bison, elk, and brucellosis, is inexcusable and blatantly illegal.⁴ Instead of addressing this issue, the agencies avoid it by stating that “none of the alternatives in this draft plan/ environmental impact statement would change livestock grazing practices in the park, nor would any alternatives mandate that such use continue.”⁵ While immediately closing GTNP to cattle grazing may require an act of Congress, the NPS should have included such a proposal in one or more alternatives if it were genuinely interested in a comprehensive plan to address the alleged risk of disease transmission from elk or bison to cattle. If there were no cows in GTNP at any time of the year, the agencies would have greater flexibility</p> <p>⁴ In 8/24/01 comments submitted on behalf of The Fund for Animals and the Animal Protection Institute on the Notice of Intent to prepare a Management Plan and Environmental Impact Statement for Bison and elk at the National Elk Refuge and Grand Teton National Park, the agencies were advised that the scope of the EIS had to be broadly defined to include cattle grazing and management issues.</p> <p>⁵ See also, Draft EIS at 490, “requiring adjustments to livestock grazing operations in Grand Teton national Park and other federal areas is beyond the scope of this planning effort, and none of the alternatives would require a conversion from cow-calf to steer or spayed heifer enterprises.”</p> <p style="text-align: center;">4</p>	<p>17-9. See responses 17-3, 17-6, and 17-8. The agencies respectfully disagree that an alternative that eliminates grazing within Grand Teton National Park needs to be considered. The effect of cattle grazing in the park is negligible because cattle are not grazed on winter range, <i>i.e.</i>, they are not in areas where forage is available during the winter. Eliminating grazing in the national park would not address the core issues identified in the Draft EIS (pp. 9–10) — the effects of inadequate winter range for high numbers of elk and bison, and the use of supplemental feeding to maintain high elk numbers. The risk to cattle extends beyond park boundaries to wherever Jackson elk and bison range overlaps with cattle, from Buffalo Valley to South Park to any ranches that winter cattle near the refuge.</p>

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17-10	<p>in managing bison and elk and park ecology and health would improve. Similarly, if the Draft EIS was sufficiently comprehensive, it would have disclosed and evaluated data regarding cattle grazing on the public allotments of the BTNF and on BLM lands. While the FWS and NPS have no legal jurisdiction in this area, they should have invited the USFS, BLM, and other agencies to officially participate in the development of the Draft EIS as authorized by NEPA in order to create a better plan.</p>	<p>17-10. The U.S. Forest Service, the Bureau of Land Management, and the Animal and Plant Health Inspection Service are cooperating agencies in this planning process. The Wyoming Game and Fish Department is a partner. The Draft Plan/EIS acknowledged the cooperation of these agencies on the inside cover and pages iii and 4. In the Final Plan/EIS, the role of these agencies is further clarified.</p>
17-11	<p>Admittedly, it may be wishful thinking to believe that the WGFD could be convinced to phase out supplemental elk feeding throughout northwest Wyoming. To the extent that its feedgrounds in the primary or secondary analysis areas are located on federal lands and/or require federal approval to operate, however, the formal participation of the USFS and BLM in the planning process could have provided an opportunity to address the supplemental feeding issue on a broader geographic scale. Similarly, involvement of the USFS and BLM would have allowed the Draft EIS to comprehensively evaluate the implications and feasibility of restoring historic migration routes instead of largely setting aside this piece of the puzzle to be addressed at a later date. Such cooperation would have allowed the federal family to set forth a comprehensive management strategy not limited by legal or political boundaries or barriers.</p>	<p>17-11. See responses 17-8, 17-10, and 17-12. The U.S. Fish and Wildlife Service, the Bureau of Land Management, the Animal and Plant Health Inspection Service, and the Wyoming Game and Fish Department have been actively involved in the planning process at the level each agency has desired. Additionally, as stated in the Draft Plan/EIS (p. 38), the agencies continue to work together within other forums, such as the Jackson Interagency Habitat Initiative, which was organized to develop opportunities to improve habitat for elk and bison. Those cooperative efforts will continue irrespective of this planning process.</p>
17-12	<p>Though the scope of the Draft EIS was defined years ago, the agencies erred in failing to broadly establish the geographic and administrative scope of the analysis. As a consequence, the preparation of the Draft EIS was largely limited to the FWS and NPS, the applicability of the Draft EIS is limited to the NER and GTNP, and the final decision on the Draft EIS will be limited to the relevant decision-makers at the FWS and NPS. Because of the narrow scope of the Draft EIS, the impacts, implications, and justifications for specific issues and proposals, namely the potential to reestablish historic elk migratory corridors to alternative wintering areas,⁶ are not comprehensively evaluated. While the agencies propose the restoration of elk migratory patterns as part of several alternatives, the Draft EIS makes clear that the FWS and NPS would only “support stakeholder efforts to establish elk migration out of Jackson Hole to other wintering areas.” Draft EIS at xi. Therefore, though the reestablishment of elk migratory corridors would provide – as conceded by the agencies repeatedly in the Draft EIS – significant benefits to the elk, other wildlife populations, and wildlife habitat, no meaningful analysis of the specific details and impacts of such an effort is provided. Instead, the agencies clearly hope, albeit wrongly, that their “support” for stakeholder efforts to establish elk migration, though neither defined nor explained, will satisfy the public and other interest groups who have advocated for the reestablishment of historic elk migratory corridors.</p>	<p>17-12. The agencies respectfully disagree that the geographic and administrative scope of analysis was not established (Draft Plan/EIS, p. 23); see response 17-6. Under Alternatives 2 and 3 the agencies would commit to supporting others in their efforts to restore and improve elk migration corridors or habitat, but they have no authority to require other jurisdictions or landowners to participate if they are opposed to such measures.</p>
17-13	<p>By failing to broadly define the parameters for analysis, the scope of the document is clearly inadequate. The scope of an environmental document is based on the</p> <p>⁶ Though bison are more nomadic in their movements and do not engage in true migrations, the agencies decision to limit any discussion of restoring migratory routes to elk is in error. As further discussed in this comment letter, given the significant benefits, as delineated in the Draft EIS, of restoring naturalness to the bison and elk populations in the Jackson Hole area, the agencies must also support, plan for, and implement strategies to facilitate bison movements to alternative wintering sites. While the historical movement patterns for bison inhabiting the Jackson Hole area have not been specifically researched, it is indisputable that such patterns did exist and may be documented in various historical texts.</p>	<p>17-13. The Draft Plan/EIS adequately discussed the relevant, connected, and similar actions under “Purpose and Need,” the “Affected Environment,” and direct and indirect effects of the alternatives within the primary and secondary analysis areas. The Draft EIS also discussed the known reasonably foreseeable activities that could result in cumulative effects in both the primary and secondary analysis area (Draft EIS, pp. 23–31). Those impacts, where relevant, are analyzed in Chapter 4. As stated in the Draft EIS, there is no direct evidence to verify that historic migration routes existed, although there are many anecdotal reports indicating that they did (Draft EIS, p. 113). Currently, the Wyoming Game and Fish Department does not have plans to phase out feeding on state feedgrounds, nor does the department support efforts to expand elk migration out of Jackson Hole. Providing additional analysis or broadening the scope of the environmental impact statement would be highly speculative and not necessary to meet the scope of actions covered in this planning process (Draft EIS, p. 31).</p>

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	<p>consideration, in part, of whether the relevant actions⁷ are connected, cumulative, or similar. 40 C.F.R. §1508.25(a)(1), (2), and (3). Actions are “connected” if they are “closely related and therefore should be discussed in the same impact statement,” “automatically trigger other actions which may require environmental impact statements,” “cannot ... proceed unless other actions are taken previously or simultaneously,” or “are interdependent parts of a larger action and depend on the larger action for their justification.” <i>Id.</i> at §1508.25(a)(1)(i,ii,iii). A “cumulative” action has, when viewed with other actions, “cumulatively significant impacts and should be discussed in the same impact statement.” <i>Id.</i> at §1508.25(a)(2). A “similar” action, again when viewed with other reasonably foreseeable or proposed agency actions, “has similarities that provide a basis for evaluating their environmental consequences [sic] together, such as common timing or geography.” <i>Id.</i> at §1508.25(a)(3). The restoration of elk migratory routes is a component of several actions evaluated in the Draft EIS and clearly satisfies the definition of all three action types,⁸ thereby requiring a broadening of the scope of the Draft EIS to provide a comprehensive review of this specific strategy or project relevant to Jackson elk and bison management.</p>	
17-14	<p>The FWS and NPS are correct in stating that neither has jurisdiction beyond their respective land areas to restore migratory routes or corridors. The lack of legal jurisdiction, however, should not be a barrier to providing a level of analysis and scope of analysis necessary to encompass the entirety of the Jackson bison and elk management dilemma. To do this, the agencies should have included the BLM, United States Forest Service (USFS), and the State of Wyoming as cooperators in the EIS process as these entities have or share legal jurisdiction over the lands needed to restore the historic migration routes.</p>	<p>17-14. See responses 17-10 and 17-11. The Wyoming Game and Fish Department, which has jurisdiction for managing resident wildlife populations, currently does not support elk migrations out the primary analysis area into other areas where there are also conflicts and issues in managing elk populations. The agencies do not have the authority to require the state to support elk migrations out of the primary analysis area.</p>
17-15	<p>The actual role of these other agencies in the current process, as described in the Draft EIS, is unclear. The FWS and NPS first state that they “worked closely” with these other agencies (Draft EIS at 4) but then report that the decision of selecting a preferred alternative will be made “in cooperation with the U.S. Forest Service, the Bureau of Land Management, the Animal and Plant Health Inspection Service, and the Wyoming Game and Fish Department.” If these other agencies will be provided an opportunity to affect the final decision in this process, then they should have been participated as official cooperating agencies in the process.</p>	<p>17-15. See responses 17-10 and 17-11. The U.S. Forest Service, the Bureau of Land Management, the Animal and Plant Health Inspection Service, and the Wyoming Game and Fish Department were provided the opportunity to participate as cooperating agencies and partners; nevertheless, they have been involved throughout the process. The final decision will be made by the Regional Directors for the U.S. Fish and Wildlife Service and the National Park Service (Draft Plan/EIS, p. 10).</p>
17-16	<p>As defined by NEPA, a “cooperating agency” “means any Federal agency ... which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal for legislation or other major Federal action significantly affecting the quality of the human environment.” 40 C.F.R. §1508.5. A state agency with similar qualifications can also be a cooperating agency by agreement with the lead agency. <i>Id.</i> If these agencies were named as cooperating agencies at the beginning of this process – as</p> <p>⁷ An “action” as defined by NEPA includes federally approved, funded, assisted, or regulated programs, plans, new or revised rules, regulations, policies, procedures, and specific projects. See 40 C.F.R. §1508.18(a) and (b)(1-4).</p> <p>⁸ The restoration of migratory routes is an interdependent part of a larger action, could not proceed without the amendment of other federal management plans and documents, would have cumulatively significant – albeit beneficial – impacts, and would occur within a similar geographic area.</p>	<p>17-16. See responses 17-10 and 17-11.</p>

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17-17	<p>they should have been – the deficiency in the geographic scope of the Draft EIS could have been avoided as data, analysis, and decisions could have been made regarding the feasibility of, and obstacles to, restoring elk migratory routes. Including other agencies in the development of the Draft EIS would have, admittedly, made the process more difficult but given the geographic scope of the issues involved in the current and future management of bison and elk in the Jackson Hole area, their involvement was essential to developing a comprehensive plan to address these significant management issues.</p> <p>Because these agencies were not officially or legally involved in the preparation of the Draft EIS, the FWS and NPS must not allow them to have any role in the final decision-making process except as required by law.⁹ Moreover, since the USFS, BLM, and WGFD did not play a formal role in developing the Draft EIS, regardless of why, any alleged impacts of the proposed action or any of its alternatives on lands administered by these agencies can be mentioned but must not be considered during the final decision-making process. For example, the elk and bison herd objectives established by the WGFD are worth mentioning, but they should not be considered in the decision-making process.¹⁰</p> <p>2. <u>Failure to disclose all relevant information and data and to objectively evaluate the environmental consequences of the proposed action and its alternatives:</u></p>	<p>17-17. See response 17-15. While the agencies have responsibility for managing the wildlife populations within their respective jurisdictions, the Wyoming Game and Fish Department also has responsibility for managing the state’s resident wildlife populations. The state’s herd objectives (including harvest levels) are set through a public review process that requires approval by the Wyoming Game and Fish Commission. The agencies have worked cooperatively with the Wyoming Game and Fish Department to establish herd objectives in the Draft and Final EISs. The National Wildlife Refuge Improvement Act of 1997 stipulates that the U.S. Fish and Wildlife Service is to coordinate the development of conservation plans with relevant state conservation plans for fish and wildlife and their habitats.</p>
17-18	<p>For the purpose of this review, the deficiencies in the quality and quantity of information disclosed and of the analysis of that information in the “Affected Environment” and “Environmental Consequences” sections of the Draft EIS will be combined in order to highlight clear inadequacies in both sections. This analysis will be preceded with several introductory comments intended to either disclose information contained in the Draft EIS that is important in the subsequent analysis and/or to identify broad deficiencies in the quality of the analysis contained in the Draft EIS.</p>	<p>17-18. The agencies believe that the Draft and Final EISs disclose and discuss all relevant information and impacts.</p>
17-19	<p>Though the Draft EIS mentions a number of issues and concerns, the primary challenges associated with bison and elk management on the NER and GTNP stem from the ongoing supplemental feeding program which has created high and unnatural concentrations of bison and elk. This highly artificial environmental has contributed to: 1) an increased risk of potentially major outbreaks of exotic diseases; 2) damage to and loss of habitat due to browsing of willow, cottonwood, and aspen stands, with resultant reductions in wildlife associated with healthy stands; 3) unusually low winter mortality of bison and elk, which affects predators, scavengers, and detritivores; and 4) a high level of brucellosis in the elk and bison herds. Draft EIS at 9. Despite the identification of these issues as the primary challenges facing the agencies, they have failed to disclose all relevant information</p> <p>⁹ Both the NPS and FWS are required, pursuant to various statutes, regulations, and policies, to cooperate with the WGFD on the management of elk on the NER and GTNP. The role of the WGFD in the decision-making process, however, must be limited to this specific issue.</p> <p>¹⁰ Though the Draft EIS claims that the WGFD’s objective for the Jackson bison herd is 400 animals, it is unclear when the WGFD established this objective or whether the WGFD complied with state law in establishing this herd objective.</p>	<p>17-19. The “Purpose and Need” section adequately discusses the purpose of and the need for the proposed action.</p>

Comment No.	Letter 17 (cont.)	Response
17-20	<p>regarding these alleged impacts in the Draft EIS as will be discussed in greater detail below.</p> <p>Besides the importance of disclosing all relevant information, objectivity and accuracy of the analysis are critical components of any NEPA process or document. The lack of objectivity potentially reflects a purposeful attempt by the federal agency or agencies to ensure that a particular solution or alternative appears to be the most beneficial and/or to influence the public's perception of a particular alternative or issue relevant to the analysis. The Draft EIS does not provide a completely objective analysis of the impacts, alternatives, or issues. For example, in both the summary and purpose and need sections of the Draft EIS, the agencies clearly delineate the alleged concerns or problems associated with the Jackson bison herd (i.e., greater damage to habitats, competition with elk, risk of disease transmission to elk and domestic livestock, risk to human safety, damage to private property, and costs of providing supplemental feed for bison), Draft EA at v and 7, yet it fails to disclose or substantially downplays similar concerns in regard to elk. This is done despite the fact, as becomes obvious in latter sections of the document, that alleged impacts of the elk population are, in many ways, greater than those of the bison population.</p>	<p>17-20. The agencies disagree with the assertion that impacts from the elk herd are downplayed compared to impacts from the bison herd. The impacts of the two populations were both discussed in substantial detail in Chapter 4.</p>
17-21	<p>As the analysis of the environmental consequences of an action and its alternatives forms the heart of any NEPA document, objectivity is critical to a proper analysis. In the Draft EIS, intentionally or unintentionally, the agencies failed this test by failing to address or equally address every issue in evaluating each alternative. Moreover, the awkward format of this section of the Draft EIS in which the agencies break down their discussion of impacts by subject (e.g., impacts on habitat, impacts on the Jackson bison herd, and social and economic impacts) makes it difficult for the public and decision-makers to understand how these alleged impacts interrelate holistically. This, in turn, makes it difficult to compare and contrast each alternative to assess their merits, justifications, and short and long-term consequences.</p>	<p>17-21. The Draft and Final EISs adequately disclose the effects of all alternatives and provide a range of alternatives for the decision-makers.</p>
17-22	<p>The accuracy of the information contained in an environmental document is also critical to the process. The accuracy of the cited information is determined by both the quality of the information and the quality of the interpretation of the information. In this case, both the FWS and NPS claim to base their management decisions on sound science, yet because their management frameworks, philosophies, and mandates are significantly different, the practical impact of the scientific information on management practices and policies complicates the implementation of joint management decisions. The FWS, while mandated to protect and conserve wildlife, is authorized to allow compatible uses. Conversely, the NPS, though authorized to allow public use of the parks unless such use would cause an impairment, is primarily responsible for protecting the superlative values, including the wildlife, of its lands and preserving natural processes. Consequently, in general, activities allowed on national wildlife refuges would not necessarily be permissible on national parks.¹¹</p> <p>¹¹ GTNP is unique among national parks as its enabling legislation authorizes, but does not mandate, an elk reduction program.</p>	<p>17-22. Thank you for your comment.</p>

Comment No.	Letter 17 (cont.)	Response
17-23	<p>These differences are relevant to the analysis in the Draft EIS since the agencies attempt to apply the same standards to the NER and GTNP. For example, the Draft EIS defines wildlife management to be “the science and art of making decisions and taking actions to change the structure, dynamics, and interactions of habitats, wild animal populations, and people to achieve specific human goals,” (citing Giles 1979). Draft EIS at 16. This utilitarian definition of wildlife management assumes a greater human role in shaping and manipulating ecosystems, habitats, and populations than should be acceptable on any national wildlife refuge and that is clearly in conflict with the natural regulation legal mandates of the NPS. The suggestion that this definition is consistent with NPS policies is flatly wrong.</p>	<p>17-23. The agencies disagree that the same standards have been applied to the National Elk Refuge and Grand Teton National Park. The definition of wildlife management is not in conflict with the legal mandates of the National Park Service, as there is no NPS “legal mandate” for “natural regulation.” NPS policies state, “when-ever possible, natural processes will be relied upon to maintain native plant and animal species and to influence natural fluctuations of these” (NPS 2000, 2006, sec. 4.4.2). Higher densities of elk on the refuge have allowed for historical population levels in the park to be maintained. However, since the context of this section was to point out that considerable science and research were used in preparing the Draft Plan/EIS and not to define wildlife management, the definition was removed from this section in the Final Plan/EIS.</p>
17-24	<p>This following issue-by-issue discussion will specifically evaluate the objectivity of the analysis of the environmental consequences of each alternative. It will largely focus on Alternatives 2, 3, 4, and 6 as these represent management strategies that are most likely to be selected, in whole or in part, by the FWS and NPS in a Final EIS and Record of Decision. Alternatives 1 and 5, though they may be referenced to support specific claims, will not be the focus of discussion as their alleged impacts are so significant that it is unlikely that either would be chosen as part of the final management plan. This discussion will also identify some – but not all – of the many inconsistencies identified throughout the environmental consequences section of the document.</p>	<p>17-24. The agencies believe that all the alternatives are reasonable and that any one of the alternatives, or portions thereof, could be combined into the final preferred alternative.</p>
17-25	<p>As a preface to this discussion, the frequent reference to personal communications throughout this analysis is of concern as it suggests that the alleged impacts of specific actions are based on the best judgment of individual biologists instead of being the product of an actual study or studies. The frequent use of the words “may,” “might,” and “potentially” also raise concerns as these terms suggest that the agencies don’t really know what to expect in regard to the impacts of a particular alternative. Moreover, the lack of reference to any study in many cases in which the agencies make a conclusive statement about a particular impact is also troubling as it appears the agencies have failed to do the requisite homework to more accurately predict the true impacts of each alternative.</p>	<p>17-25. Since the commenter did not make a specific reference to any of the information cited in the Draft Plan/EIS, it is noted that where an actual study could be referenced in the Draft EIS, that was done. References to personal communications were identified as such, and often the best judgment is that of professionals working in the field on a day-to-day basis. Substantial research and modeling was undertaken in preparing the Draft EIS. Where uncertainty existed, qualifiers such as “potentially” were used.</p>
17-26	<p>Finally, though the agencies attempt to ascertain the short and long-term impacts of various alternatives in which bison and elk population size could change drastically, the agencies failed to even attempt to model these changes to better predict what could happen to the elk and/or bison populations, other wildlife species, or wildlife habitat. While models of natural ecosystems or ecosystem processes are never perfect, they can provide some idea of what may happen to various ecosystem components as population dynamics are changed. A model, for example, could and should have been developed to support the evaluation of the impacts of the alternatives on habitat instead of relying on the best guesses of agency biologists. This is not to suggest that these guesses are wrong but that the use of a model would have provided additional evidence to support or reject the opinions of those scientists.</p> <p><u>Soils:</u> No substantive comments on this issue are provided.</p> <p><u>Climate:</u> No substantive comments on this issue are provided.</p>	<p>17-26. Modeling was used to predict how much forage would be available under the various alternatives (Draft Plan/EIS, pp. 250, 310). A study (Dobkin, Singer, and Platts 2002) was undertaken to estimate woody vegetation recovery under each alternative (Draft EIS, p. 216). In the Final Plan/EIS, a methodology section was added to “Impacts to Habitat” to clarify the analysis.</p>

Comment No.	Letter 17 (cont.)	Response
17-27	<p><u>Water resources:</u> Though water samples taken from the NER have consistently met or exceeded the drinking water standards imposed by the Environmental Protection Agency, nitrate levels documented in 1997 and 2002 were higher than expected. DNA analysis of fecal coliforms conducted in 2002 revealed 34%, 13%, 13%, 13%, 7%, and 7% come from rodents, bison, elk, unknown sources, canines, and birds, respectively. Other sources of pollutants such as irrigation and fertilizing may also be affecting the nitrate levels. In addition, as disclosed by the agencies, fecal material from livestock and waterfowl may also be affecting water quality in certain areas. Draft EIS at 95. The agencies concede, however, that fecal material from wintering elk and bison has not been documented as a problem on the refuge and that further study is needed to understand the impacts of various point and non-point pollutant sources on water quality. Draft EIS at 95. Within GTNP, a similar study of fecal coliform sources was conducted in 2000 and determined that the source of coliforms in irrigation diversions within the Elk Range areas largely originated from bovines (cattle) (32%) followed by bison (9%), elk (9%), unknown sources (26%), with the remainder from rodents, foxes, birds, horses geese, and waterfowl. Draft EIS at 98.¹²</p>	17-27. Thank you for your comments.
17-28	<p>Despite admitting that they do not know the precise impact that fecal matter from wild ungulates has on water quality, the agencies are quick to disclose that a reduction in the size of ungulate populations would improve water quality on the refuge. While this may be true, the agencies have no data to document a cause and effect relationship between ungulate population size and water quality and, therefore, should not assume certain outcomes without proof.</p>	17-28. The language in the Final Plan/EIS was revised to make it clearer that outcomes of the alternatives are not certain and only potential.
17-29	<p><u>Visual resources:</u> An example of an inconsistency in the analysis contained in the Draft EIS can be found in this section. The agencies state that the “impacts to visual resources (on the NER) due to reductions in elk and bison numbers caused by a potential outbreak of an infectious disease would be substantially lessened under this alternative (Alternative 6),” Draft EIS at 205, but then claim that for the GTNP, “as described for the National Elk Refuge, a non-endemic infectious disease could have major impacts on wildlife resources (and therefore visual resources) in the park.” Draft EIS at 205. Both statements cannot be true.</p>	17-29. In the Final Plan/EIS the language about the impacts to the visual resources as a result of a potential outbreak of an infectious disease under all the alternatives was clarified.
17-30	<p><u>Habitat:</u> Though the impact of elk and bison on habitat resources, particularly aspen, cottonwood, and willow stands, is identified as a primary challenge in the Draft EIS, the condition of many of the specific habitats on the NER and GTNP is described as good (e.g., marshlands, wet meadows, native grasslands and sagebrush shrublands on the NER (Draft EIS at 103, 104) and marshlands, wet meadows, native grasslands, and conifer forests on the GTNP (Draft EIS at 110 and 111)) though adverse impacts may be present within some habitat types in localized areas. The fact that such habitats remain in good condition demonstrate the ability of these habitat types to withstand grazing/browsing by wildlife populations. Moreover, as disclosed in the Draft EIS, Zeigenfuss et al. (2003) found little</p> <p>¹² Another important disclosure to note is that of the water diverted annually to be used for flood or sprinkler irrigation within the refuge, only 5-10 percent actually reaches its destination due to, in part, the porosity of the soils and to the state of disrepair of the ditches and headgates.</p>	17-30. As stated in the Draft Plan/EIS (p. 104), the poor condition of most of the woody vegetation on the National Elk Refuge indicates that not all habitat types are able to withstand overbrowsing by wildlife populations.

Comment No.	Letter 17 (cont.)	Response
17-31	<p>evidence of reductions in vegetation productivity due to grazing by elk and bison and few negative influences of grazing on plant species diversity. Draft EIS at 211.</p> <p>It is important to note that grazing/browsing is not the only impact to these habitats. The suppression of natural fires and the impacts of invasive, non-native species also can contribute to the decline in the quality and quantity of these habitats. Despite acknowledging these other potential factors adversely impact marshlands, wet meadows, grasslands, and sagebrush habitats, the Draft EIS fails to identify or discuss what specific role these factors have played in influencing the abundance, composition, and productivity of these habitat types on the NER and GTNP. Perhaps the lack of fire or a general decline in precipitation has caused or contributed to impacts to these habitat types to a greater degree than grazing by ungulates. These distinctions are important as they directly influence what emphasis should be placed on different management strategies to improve the quality and quantity of various habitats.</p>	<p>17-31. The suppression of natural fires and the impacts of invasive weeds have impacted the quality of habitat on the National Elk Refuge, but prescribed fire is currently used to some extent to improve forage on the refuge, and precipitation patterns have been generally normal over the past 20 years (Smith, Cole, and Dobkin 2004). Numerous studies and ongoing monitoring have clearly documented that overbrowsing by ungulates is the primary reason for the decline of woody vegetation on the refuge.</p>
17-32	<p>The documented impacts on riparian (willow and cottonwood) and aspen woodland communities are more significant, though elk and bison impacts are not the only factors that may adversely impact such habitats. As disclosed in the Draft EIS, willow habitat (and presumably cottonwood and aspen habitat), for example, is influenced by flooding, hydrologic conditions, fire frequencies, precipitation patterns, ungulate browsing, livestock use, and development. Draft EIS at 105, 113, 116, and 117). Moreover, a variety of other herbivores including mule deer, moose, beavers, porcupines, small mammals, birds, and insects, feed on woody vegetation and, therefore, contribute to the impacts to these communities. Draft EIS at 215.</p>	<p>17-32. Thank you for your comment.</p>
17-33	<p>While the agencies suggest that the majority of the adverse impacts on aspen, willow, and cottonwood habitats on the NER is caused by ungulates, the agencies fail to adequately explain what role the different factors (i.e., ungulates, furbearers, other wildlife, livestock, fire frequency, precipitation patterns) has had on the quality and quantity of each habitat type and if or how the impact of each factor has changed over time. It is easy to blame ungulates, particularly elk, for adverse impacts on woodland and riparian vegetation but it is far more difficult to prove that other factors haven't directly or indirectly contributed to the decline in the quantity and quality of these habitat types. The Draft EIS contains, for example, no discussion of historical or recent precipitation patterns and amounts or changes in precipitation over time on the NER and GTNP. As the amount and timing of precipitation is critical in determining vegetative productivity and can have cascading effects throughout an ecosystem, failure to disclose this information is a substantial flaw in the Draft EIS. The agencies also fail to disclose any information about historical fire frequencies and what, specifically, they have done – if anything – to restore the role of fire in these habitat types and what, if any, impact such efforts have had on the abundance, composition, and/or productivity of these habitats. Moreover, how have the hydrologic and flooding patterns changed over time on the NER and GTNP and what impact have such changes had on these habitats? Such information is critical to understanding what role ungulates have played in affecting the restoration, regeneration, or recovery of these habitat types and what level of impact can be attributed to other factors.</p>	<p>17-33. See response 17-31. The agencies agree that a discussion on the role of fire should be added to the Final Plan/EIS. The Draft Plan/EIS (p. 215) acknowledged that aspens are declining as a result of age and lack of natural fires. Information on the use of prescribed fire and precipitation has been added to the “Environment Consequences” in the Final EIS.</p>

Comment No.	Letter 17 (cont.)	Response
17-34	<p>Clearly, based on a review of Table 3-5 (Draft EIS at 108), something changed between 1993 and 1994 that drastically lowered the production of herbaceous forage, total forage, and cultivated fields on the NER yet the agencies provide no explanation as to what happened and whether the cause of the decline was natural or manmade. Such information must be disclosed in the Draft EIS as it provides the public with a greater understanding of the ecosystem processes, anthropogenic factors, and other issues that affect the quality and quantity of these most important riparian and woodland habitat types.</p>	<p>17-34. Information has been included in the Final Plan/EIS to explain the variability in forage production from year to year. Record-breaking precipitation occurred in 1993. The agencies retrospectively analyzed forage production data against several possible explanatory variables and found that precipitation explained most of the variability in forage production from year to year. Grasshopper populations, typically associated with drought, played a lesser role, but it is more difficult to quantify this effect.</p>
17-35	<p>Natural successional change is also contributing to changes in the composition of vegetative communities in the NER and GTNP. While various factors may stop, reverse, or even promote succession, succession itself, as a natural phenomenon, is not a bad thing even if it results in lower species diversity and/or a decline in the quality of a particular habitat type. In addition, as large ungulates, bison and elk will have impacts on any habitat that they occupy. As the dominant herbivores in an ecosystem, these impacts may alter, positively or negatively, the quality and quantity of certain habitat types and the ability of these habitats to sustain a diverse biota. Whether such impacts are deemed to be positive or negative are a function of human criteria or judgment and have nothing to do with natural processes. Thus, a land use or management objective of maintaining high biodiversity may require the constant human manipulation of a habitat in order to maintain a particular successional state that supports a diversity of species. The impacts of bison and elk in an ecosystem, therefore, while potentially undesirable from a human perspective, represent natural influences. What is unnatural in the context of the NER and GTNP, however, is that the ongoing supplemental feeding program has fundamentally altered the population dynamics of bison and elk creating artificially high populations.</p>	<p>17-35. Thank you for your comment.</p>
17-36	<p>To the extent that wild ungulates are responsible for some of the impacts to willow, cottonwood, and aspen woodlands, using the term ungulates in the context of the Draft EIS unfairly implicates bison as contributing to whatever impacts are occurring. While bison may impact woodland trees, particularly cottonwood, as a result of girdling caused by rubbing, their browsing impacts to these species are minimal. Though not highlighted in the Draft EIS, the agencies do subtly concede that elk browsing poses a far greater impact to aspen, willow, and cottonwood habitats compared to bison (See, for example, Draft EIS at 215). This is not surprising considering the elk, as disclosed in the Draft EIS, are considered intermediate feeders as they are less selective than grazers or browsers. Draft EIS at 122. As a consequence, elk are more likely to be found in woodland habitats compared to bison. In specific instances, however, the Draft EIS continues to blame bison for adverse browsing impacts to riparian and aspen habitats. For example, in its analysis of Alternative 1 on page 227, the Draft EIS claims that “forage production declines would be due primarily to the decrease of woody vegetation as large numbers of elk and bison browsed in riparian and aspen woodland habitats.” This is not to say that bison cannot or will not browse woody vegetation but that, in order to provide an objective analysis of the relative roles of various impact factors on vegetative communities, the agencies must ensure that they don’t overstate or embellish upon the alleged cause of certain impacts.</p>	<p>17-36. The agencies respectfully disagree that the Draft Plan/EIS unfairly implicates bison in the degradation of habitat that is occurring. The habitat impacts of each alternative were estimated and described using the baseline conditions that have been carefully studied over time. Bison are large, gregarious, and social animals. When large groups of bison congregate in areas with woody vegetation, which occurs on the northern part of the refuge during the fall, winter, and early spring, they can have a major impact on the degradation of woody vegetation. Currently, the bison population is growing unchecked at 10%–14% annually, and the population is now estimated to be 1,000 animals.</p>
17-37	<p><u>The Jackson elk herd:</u> To simplify and shorten their analysis, the agencies inappropriately elected to discuss diseases of elk and bison in the same section of the Draft EIS. Draft EIS</p>	<p>17-37. See next page for response.</p>

Comment No.	Letter 17 (cont.)	Response
<p>17-37 (cont.)</p>	<p>at 126-136. Combining the description of disease issues creates the impression that brucellosis in bison and elk, including feedground elk, is identical when, indeed, there are significant differences between species and between fed and non-fed elk populations in regards to the impacts, implications, epidemiology, and pathogenesis of the bacteria. For example, the Draft EIS claims that “studies indicate between about 50% and 90% of females abort their first calf after infection,” Draft EIS at 126. Because there is no indication of what species is being referred to in this statement, it would be easy – but incorrect – to assume that this statement applies to bison and elk equally. There is no evidence, however, that 50% to 90% of Yellowstone bison, for example, will abort their first calf after infection. In fact, the evidence suggests that brucellosis-caused abortions in Yellowstone bison are rare as would be expected in a chronically exposed herd. In this case, the citation to Davis et al. (1990 and 1991) would suggest that the agencies believe that this abortion rate is applicable to bison. What the agencies fail to disclose is that the methodology used by Davis et al. (1990 and 1991) was not representative of natural conditions as their experiments were conducted in crowded laboratory corrals.</p>	<p>17-37 (cont.). This section in the Final Plan/EIS has been revised to clarify brucellosis information and its impacts on bison and elk. In particular, the example sentence has been revised.</p> <p>The Draft Plan/EIS noted that chronically infected herds have abortion rates in the single digits and cited numerous sources.</p> <p>Rates of abortion after brucellosis infection in bison and elk have been clarified in the Final Plan/EIS. Bison rates described by Davis et al. (1990, 1991) are true of both captive and free-ranging bison. Abortions during the first pregnancy are approximately 90% after infection, during the second pregnancy abortions decrease to approximately 20%, and during the third pregnancy abortions approach zero.</p>
<p>17-38</p>	<p>To prevent or minimize misunderstandings relevant to the disclosure of information about brucellosis in bison and fed and non-fed elk, the agencies must separate these discussions, identify the species-specific differences in the epidemiology and pathogenesis of the bacteria, and disclose other differences (and similarities) among and between the species (i.e., immunological response to Strain 19 and RB51 vaccines).</p>	<p>17-38. The agencies believe that separating the discussion of brucellosis and its effects on bison and elk is not necessary. Text has been revised in the Final Plan/EIS to better clarify differences between species.</p>
<p>17-39</p>	<p>In addition, considering that disease transmission concerns are identified as a primary challenge in the management of elk and bison and that brucellosis is a disease that currently afflicts both elk and bison populations in the Jackson Hole area, the agencies must provide a more detailed discussion of the bacteria, its epidemiology and pathogenesis, and its impact on bison and elk (both fed and non-fed). The four-pages in the Draft EIS in which the agencies discuss the <i>Brucella</i> bacteria and its impact on elk and bison are simply not sufficient. Additional information and/or expanded analysis of brucellosis is essential for the public to adequately understand all aspects of this disease and its impact and potential impact on bison, elk, and other wildlife species.</p>	<p>17-39. The brucellosis discussion has been revised, and text has been added to present more information about the bacteria and its impacts. The agencies believe that the revised discussion adequately informs the public about the disease.</p>
<p>17-40</p>	<p>For example, the agencies must provide an expanded discussion of the sex-specific risk of transmission to ensure that the public understands that pregnant elk and bison are the only animals that can theoretically cause an intra or interspecific transmission event. A broader discussion of the viability of the organism over time and under variable environmental conditions must be provided so that the public can understand that the risk of a transmission event as a consequence of environmental contamination is virtually non-existent. To do this, the agencies must disclose information obtained from bacteria persistence studies conducted in and around Yellowstone National Park. Similarly, the agencies must disclose data on fetal disappearance rates from studies conducted in and around Yellowstone National Park in addition to whatever related data may be available for the Jackson Hole area so that the public understands that if an abortion occurred, particularly outside of a feedground setting, the chance of a susceptible cow contacting the aborted fetus is immeasurable.</p>	<p>17-40. Text about organism viability and fetal disappearance rates has been added in the Final Plan/EIS. This information does not indicate that transmission is so unlikely that it would not occur, although very low risk is expected outside of a feedground setting. Elk were the suspected source behind Wyoming and Idaho livestock infections and the loss of brucellosis-free status.</p>

Comment No.	Letter 17 (cont.)	Response
17-41	<p>Additional information about vaccines (specifically Strain 19 and RB51), their species-specific efficacy, scientific controversy surrounding the alleged benefits of the vaccines, a summary of recent elk vaccination efforts on the NER by the WGFD, and the availability of ecologically appropriate delivery systems must also be presented.</p>	<p>17-41. The Draft Plan/EIS provided information about Strain 19 (pp. 553–63) and RB51 vaccines (pp. 332–7). Text has been added to the Final Plan/EIS to ensure an accurate understanding of these vaccines.</p>
17-42	<p>Finally, if the public and agency decision-makers are expected to make a determination as to what management strategy is most appropriate to address, primarily, the potential for disease (brucellosis and non-endemic diseases) transmission among and between bison, elk, and cattle, a risk assessment must be incorporated into the Draft EIS.¹³ Disclosing such information is crucial to the public’s understanding of this important, yet controversial, issue of the risk of bacteria transmission. While AWI and HSUS may disagree with the agencies over the relative risk of a transmission event, the public will never be able to adequately assess the risk of a transmission event without a full assessment of this risk and the potential effectiveness of strategies to reduce this risk.</p>	<p>In the Final Plan/EIS, text has been added summarizing WGFD elk vaccination efforts.</p> <p>If by “ecologically appropriate delivery systems” the commenter means oral vaccines, there are none currently available.</p> <p>17-42. The Draft Plan/EIS contained a disease risk assessment and adequately analyzed comparative risk among alternatives for a variety of diseases. Based on available science, including recommendations from the Greater Yellowstone Interagency Brucellosis Committee (1997), a disease experts meeting held at the National Elk Refuge (November 2002), and other published scientific literature, the Draft EIS discussed what is known about the risk for brucellosis transmission from elk or bison to livestock (pp. 128, 487–91, 494, 497, 499, 501). Table 4-6 (p. 257) analyzed the comparative risk among alternatives for chronic wasting disease. Table 2-9 (p. 87) also provided a comparative analysis for risk transmission.</p>
17-43	<p>In regard to vaccination, several alternatives would allow the vaccination of elk with Strain 19 or another, more efficacious, vaccine and at least one alternative will allow the vaccination of bison with RB 51.¹⁴ While the vaccination discussion in the Draft EIS refers to the potential future use of an oral vaccine, the implications of the annual or sporadic use of a vaccine delivered by hand injection, dart, or bio-bullet are not clearly explained. In particular, though the agencies repeatedly refer to vaccination modeling results reported by Gross, Miller, and Kreeger (1998), they fail to explain how those results will change when the vaccination of elk calves and/or cows cannot be accomplished each year due to a reduction in the frequency of winter feeding as proposed under several alternatives (Alternatives 3, 4, 5, and 6). In its analysis of Alternative 3, for example, the agencies report that if a suitable vaccine (greater than 50% efficacy in preventing abortion and infection) could be developed and delivered to approximately 80% of susceptible elk calves on the refuge <u>every year</u>, there would only be a 40% reduction in seroprevalence in the refuge portion of the Jackson elk herd (emphasis added). Clearly, if the vaccine cannot be delivered each year, the overall impact (for the elk or bison populations) would be significantly less and would likely not justify the effort, expense, and time required to vaccinate the animals. The failure of the agencies to explain how the more sporadic vaccination of elk and/or bison could affect the value of any vaccination program is a critical deficiency in the Draft EIS since such information could influence the selection of an environmentally preferred alternative.</p> <p>¹³ When the lengthy history of the controversy surrounding bison management in Yellowstone National Park is considered, the NPS has failed for over 15 years to prepare any type of legitimate risk analysis or assessment by continuing to claim that there is not sufficient data or information to prepare such an analysis. This is blatantly wrong and reflects an unwillingness of the NPS (and other federal and state agencies) to prepare a risk analysis because they fear that the results will demonstrate that their management strategies are not consistent with the level of risk.</p> <p>¹⁴ The efficacy of RB 51 and Strain 19 in affording protection to bison and elk against abortion and infection is low. As a consequence, the use of these vaccines is a waste of time, effort, and money. Previous elk vaccination efforts on the NER have had no measurable impact on the seroprevalence of the bacteria and, in regard to the most recent effort by the WGFD to force its way on to the NER to initiate an elk vaccination program, its actions were in violation of federal law. While AWI and HSUS generally oppose the use of vaccines under these circumstances, the vaccination of feedground elk would be warranted if a safe and efficacious vaccine was available.</p>	<p>17-43. This section has been revised, and text has been added to indicate reduced vaccine effectiveness when vaccination is sporadic. Changes in brucellosis prevalence were evaluated for each alternative based on several factors. For example, prevalence would decrease under Alternative 3, whether or not vaccination occurred, because densities and potential transmission would decrease in non-feeding years.</p>

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17-44	<p><u>The Jackson Bison Herd:</u> The Draft EIS fails to provide all relevant information about the ecology and biology of the Jackson bison herd. A critical example of missing data is the lack of any discussion of the historical movement patterns of bison in and beyond the Jackson Hole area. This is crucial to understanding whether bison, with or without agency assistance and efforts, could rediscover historic movement corridors or areas thereby facilitating efforts, particularly in the event that supplemental feeding is reduced or, preferably eliminated, to find and use alternative wintering sites. While the agencies failed to include the restoration of bison movement corridors (as a nomadic species bison do not engage in what would be technically considered migratory movements) in any of the alternatives evaluated in the Draft EIS, they must do so (as they have for elk) in order to provide bison with the same potential benefits as those articulated for elk if their historic migratory routes were restored.</p>	<p>17-44. The Draft Plan/EIS discussed what is known about the historical locations of bison in the Jackson Hole area. As stated in the Draft EIS (p. 144), bison were absent from Jackson Hole from at least 1840 to 1948, with the exception of three Yellowstone bison that wandered south to Jackson Hole in 1945. In 1996–97 nine bison moved from Yellowstone National Park to Jackson Hole, but similar movements may not recur. Movement of bison into other areas was discussed in the Draft EIS (pp. 311–12) and under each alternative. Significant movements through other corridors are not likely without the support of the Wyoming Game and Fish Department and other land-owners. As discussed under Alternative 2 (p. 318) and Alternative 6 (p. 336), it is likely that any free-ranging bison would be hunted or removed by the state because of threats to public safety, property, or the health of domestic livestock.</p>
17-45	<p>The Draft EIS also fails to provide a substantive analysis of bison genetics, the genetic viability of the Jackson bison population, and the impact of various management strategies on the genetic health of the population.</p>	<p>17-45. The agencies believe that additional extensive analysis of Jackson bison genetics is not necessary for the formation of an appropriate management plan. The Draft Plan/EIS recommended various population sizes to provide a range of alternatives, and it discussed the need to introduce unrelated bison into the herd if numbers averaged below 400. For the Final Plan/EIS, the Preferred Alternative recommends a minimum population of approximately 500. The herd would be adaptively managed based on the monitoring of populations and habitat. Ultimately, herd size would be subject to public review and approval by the Wyoming Game and Fish Commission. Introducing unrelated bison into the herd could be an option if new science on genetics indicated that doing so was warranted. Also see responses 17-46 and 17-47.</p>
17-46	<p>First, the agencies must provide additional information about the genetic health and viability of the existing Jackson bison herd. Relevant questions that are not answered in the Draft EIS include: 1) Have DNA analyses been done to obtain genetic information from the Jackson bison population?; 2) Is the NRAMP1 or SLC11A1 gene found in Jackson bison?; 3) If so, what is the prevalence of the gene (which provides natural resistance to brucellosis) in the population?; and, 4) What is the level of genetic diversity or variability within the Jackson bison herd and how does it compare to other public land bison herds and to the genetic diversity/variability measured in bison from the early to mid-1800’s before bison were subjected to a population bottleneck due to the near extermination of the species from the North American continent?. While it has already been determined that Jackson bison, like Yellowstone bison but unlike many other publicly managed bison herds, show no genetic evidence of hybridization with cattle, these other questions must be answered before the agencies can decide on a preferred alternative because, without such evidence, the impact of the selected alternative – including hunting -- on the genetic health of the Jackson bison herd cannot be ascertained. This information is particularly important considering that even the agencies concede that, because “the population is small,” one to ten migrants may have to be added to the Jackson bison herd per generation to “prevent the Jackson bison herd from experiencing ‘genetic drift,’ or the loss of genetic variation.” Draft EIS at 151.</p>	<p>17-46. Some genetic analyses have been done, primarily focused on gene diversity and introgression for cattle genes. In the analyses completed to date, no evidence was found for cattle genetic introgression. Management would focus on maintaining existing genetic diversity, not specific genes. Unknown effects could be obtained by selecting for specific genes, and thereby selecting for closely linked traits. The presence and prevalence of NRAMP1 and other disease-resistance genes are not part of the management criteria. Text in the Final Plan/EIS has been revised to better describe Jackson bison genetics.</p>
17-47	<p>Second, the agencies must engage in a more critical analysis – using the genetic data specific to the Jackson bison herd – to more accurately determine what size the Jackson bison herd should be in order to maximize the protection of genetic diversity and, specifically any rare or unique alleles that may be essential to protect the long-term genetic viability of the Jackson bison population. The assurance the agencies offer in the Draft EIS that the “genetic viability (of the Jackson bison herd) would be threatened if the bison herd dropped below 400 animals and effective population size decreased below 100 (citing Berger 1996), Draft EIS at 151, is not satisfactory nor does it address our concerns.</p>	<p>17-47. See response 17-45. The agencies believe that by adopting an adaptive management approach, based on monitoring, a genetically healthy herd can be maintained while addressing the many other biological and social issues, including severe habitat degradation on the National Elk Refuge. Text in the Final Plan/EIS has been revised to include discussion of a modeling report by Gross et al. (2006) that evaluates genetic diversity retention in several NPS bison herds.</p>

Comment No.	Letter 17 (cont.)	Response
17-48	<p>Though this threshold of 400 bison is intended to represent a minimum population below which the genetic viability of the population would be threatened, in their analysis of the environmental consequences of the alternatives, the agencies fail to acknowledge that any alternative that maintains the bison population at a minimal size of 400 (Alternatives 5, 6) could potentially threaten the genetic viability of the bison population. This claim is reckless because, assuming for the sake of analysis that the 400 threshold is legitimate, as the bison population declined toward that number the potential adverse implications to the genetic viability of the population would increase. As a consequence, managing for a larger population size would obviously provide a greater safety margin in terms of protecting the genetic viability of the Jackson bison herd.</p>	<p>17-48. See responses 17-45 to 17-47. The Preferred Alternative would recommend a population of approximately 500 animals, and introducing unrelated bison into the herd could be easily accomplished if necessary.</p>
17-49	<p>The reality, however, is that the 400 population threshold is an educated guess made by Berger (1996) without the benefit of demographic or genetic data specific to the Jackson bison herd and, therefore, may or may not be accurate. Based on the analysis provided by Berger (1996), the effective size of a population may be 15% to 34% of the actual population size. Thus, while a population of 400 bison could represent an effective population size of 100 (25%) it also could represent an effective population size of 60 (15%). An effective population size of 60 would not be nearly enough to preserve the genetic viability of the Jackson bison population. If, in the case of Jackson bison, the effective population size was 15% of the actual population size, the population threshold would have to be set at 667 animals to preserve an effective population size of 100.</p>	<p>17-49, 17-50. Berger (1996) calculated effective population size using the average percentage of actual population size. The agencies believe this method is reasonable. See responses 17-47 and 17-48.</p> <p>17-51. Bison management would not attempt to retain specific genes but would strive to preserve genetic diversity. Recent modeling work by Gross et al. (2006) examined the effects of various population control strategies and may be useful in assessing fertility control impacts. Text has been added to the Final Plan/EIS about their results.</p>
17-50	<p>Even with an effective population size of 100 only 86% of the genetic variance of the population would be preserved over time (Berger 1996). Depending on the genetic characteristics and genetic viability of the Jackson bison herd, it may be essential to preserve a greater proportion of the herd's genetic variance requiring a larger effective and actual population size. As reported by Berger (1996), the preservation of 95% of selectively neutral heterozygosity for the next 200 years would require an effective population size of 600 which would translate into an actual population size of 1765 to 4000 (assuming the effective population size is 15% to 34% of the actual population size). Admittedly, further analysis of this issue could also determine that managing for a smaller herd size could still protect the genetic variability in the population. The agencies simply can't make this determination because of a lack of information and analysis.</p>	<p>17-52. See responses 17-53 and 17-54. After careful analysis and consideration, the agencies determined that fertility control for elk is not a reasonable alternative for use on the National Elk Refuge or in Grand Teton National Park (Draft Plan/EIS, p. 75), and this was not changed in the Final Plan/EIS. The use of contraceptives in bison was considered as an option under Alternative 2, but it was not selected as part of the Preferred Alternative. As the commenter noted, there are substantial obstacles in implementing this program, including the lack of a contraceptive method that would meet all desired criteria — effectiveness, regulatory approval, behavioral aspects, and safety for both target and non-target species and personnel. Further, it was not supported by the Wyoming Game and Fish Department, most stakeholder groups, or the public who commented on the Draft EIS. Currently, PZP vaccine has not received regulatory approval for widespread use. Some experimental studies of one-shot PZP vaccine have been undertaken in horses by John Turner and Jay Kirkpatrick (Rhyan, pers. comm. 2006). The U.S. Animal and Plant Health Inspection Service has not investigated further use of PZP vaccine in bison because animals vaccinated with these vaccines continue to experience estrus for a period of several months, which is an undesirable side effect and not conducive to an animal's well-being. There are no new advances in delivery systems (Rhyan, pers. comm. 2006).</p>
17-51	<p>A better understanding of the genetic health of the Jackson bison herd would also be essential to fully evaluating the environmental impacts of implementing a fertility control program for Jackson bison (and elk assuming an effective immunocontraceptive can be found to be safe and efficacious in elk). This discussion will be limited to the significant benefits of implementing a fertility control program on bison though many of the issues identified below would also be applicable to such a program for elk.</p>	<p>Likewise, Leuprolide and GnRH vaccines have not received regulatory approval for human use. The use of these vaccines requires a veterinarian prescription, and animals must be marked with a "Do Not Consume" tag. The Draft Plan/EIS did not claim that GnRH vaccine was not safe during pregnancy (pp. 530-31), but it did state that further studies would have to be undertaken to determine if it was safe during later stages of pregnancy. The information (current in 2006) has been clarified in the Final Plan/EIS.</p>
17-52	<p>The agencies have, compared to previous environmental documents on this subject, provided a more rigorous analysis of the potential to use fertility control (permanent or reversible, surgical or chemical) on Jackson bison to reduce population productivity. This analysis, given the rapid change in contraceptive technologies and knowledge, must be updated and clarified before any final decision is rendered. In particular, the agencies must</p>	

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<p>17-52 (cont.)</p>	<p>go back to those scientists involved in the experimental use of PZP and GNRH to determine if any new advances relevant to the management of Jackson bison and elk have been made since this initial analysis (See Draft EIS, Appendix B and the Fertility Control in Bison sidebar on page 317) was completed. Specific inquiries should be made as to whether a one-shot PZP vaccine is now available, the efficacy of a one-shot PZP vaccine, what results have been obtained through the use of PZP in captive bison particularly in regard to repeated estrus cycles, whether any studies utilizing PZP or GNRH have been initiated on captive or free-ranging elk or free-ranging bison, and whether any advances have been made in identifying an effective delivery system for GNRH using a dart or bio-bullet. In addition, the agencies must clarify whether a “Do Not Consume” tag is required for animals who receive only PZP or if this requirement pertains to the use of GNRH as well. Considering that GNRH is “safe for use in animals that may be consumed by humans,” Draft EIS at 532, and that the adjuvant used with GNRH has been approved by the Food and Drug Administration for human consumption, Draft EIS at 529, the suggestion on page 317 of the Draft EIS that a “Do Not Consume” tag would be required on animals injected with GNRH because the drug has not been approved by the Food and Drug Administration for human consumption would seem to be in error. Finally, the agencies claim that GNRH is not safe during all stages of pregnancy but fail to provide any evidence to support that claim.</p>	
<p>17-53</p>	<p>In addition to obtaining more up-to-date information relevant to the use of fertility control in Jackson bison (and elk), the agencies must provide a new evaluation of the potential to use one or both of these immunocontraceptive agents that is more objective and not intended to dissuade the public or decision-makers from seriously considering the use of this new technology. While there may still be obstacles to overcome in implementing an immuncontraceptive program on the NER, preferably using GNRH in female bison as its side-effects and legal requirements appear to be less than PZP, the implementation of Alternative 2 provides time, albeit limited, to design and perfect the details of such a program. Instead of using such details to downplay the potential feasibility or availability of this technology, the revised analysis in the Draft EIS must assume that such details and difficulties can be overcome through the concerted effort of the agencies in cooperation with the scientists and institutions studying these immunocontraceptive vaccines.</p>	<p>17-53. See responses 17-52 and 17-54. The agencies disagree that a new evaluation is needed that is not intended to dissuade the public or decision-makers from seriously considering wildlife contraception. The potential use of contraceptives for fertility control in bison and elk was carefully and objectively researched, with input obtained from many scientific experts (Draft Plan/EIS, pp. 525–35) and the public (Final Plan/EIS, vol. 2).</p>
<p>17-54</p>	<p>The potential benefits of implementing an immunocontraception program for bison on the NER are considerable particularly in association with Alternative 2 in that it would allow for a more rapid decline in the size of the bison population than could be achieved by natural factors alone. While allowing natural factors to impact the Jackson bison population is the preferred management strategy supported by AWI, using immunocontraception to more quickly achieve a population reduction (to or closer to the population that would exist under natural conditions) in order to more rapidly phase-out the supplemental feeding program on the NER would provide benefits to a host of species and habitats and would be far more humane than subjecting these animals to a hunt.</p>	<p>17-54. Refer to responses 17-52 and 17-53. Under Alternative 2 it was estimated that it would take more than 10 years to reduce the bison population to 450–500 animals (Draft Plan/EIS, p. 317); this is similar to the Preferred Alternative in the Final Plan/EIS. As supplemental feeding was phased out, mortality would likely increase and reflect winter severity, ranging from low to high. The agencies disagree that the increased mortality (natural factors) under Alternative 2 as a result of starvation would be any more humane than hunting. Hunting would also continue in the national forest and on private lands, and depending on forage availability, bison might move out of safe zones into hunted zones in search of forage.</p>
<p>17-55</p>	<p><u>Predators and Scavengers:</u> In evaluating each of the alternatives that permits the continuation of elk hunting on the NER and GTNP and/or the initiation of a bison hunt on the NER, the agencies claim that the increase in gut piles and carcass remains from field-</p>	<p>17-55. Gut piles or carcasses are quickly consumed by other predators, and the risk of transmission to cattle is small. Cattle grazing occurs generally from mid-June through mid-October, and the majority of the hunting season occurs after this time; thus gut piles and carcasses are not likely to spread <i>Brucella abortus</i>.</p>

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17-55 (cont.)	<p>dressed hunter kills will benefit predators and scavengers. This is true. What the agencies have neglected to evaluate, however, is the risk of the <i>Brucella abortus</i> bacteria being present in the gut piles/carcass remains and, the persistence of the bacteria under changing environmental conditions, and the potential for an intra or interspecific transmission event if a susceptible animal were to lick or consume all or a portion of a gut pile or carcass remains. Since the bacteria may be present in the remains of killed animals, particularly in the reproductive tracts of female animals, the agencies must reevaluate whether allowing hunters to field dress and discard potentially contaminated body parts is appropriate given the alleged concern for a documented transmission event and the implications of such an event if it involved a domestic cow. If the agencies determine that this risk, even if low, is too high to allow hunters to leave body parts on the NER, GTNP, or BTNF, they must also revise this section of the Draft EIS to more accurately assess the potential benefits and consequences of each alternative on predators and scavengers.</p>	
17-56	<p><u>Neotropical migratory birds:</u> To the extent that neotropical migratory birds are affected, beneficially or adversely, by impacts to woodland and riparian habitats (specifically willow, aspen, and cottonwood stands), the agencies must make it clear that there are a variety of factors (i.e., hydrologic conditions, precipitation, flood control, prescribed burning, exotic species management, other wildlife), that much of these habitat types on the NER and GTNP have been in steady decline for years, and that, to the extent that wild ungulates are responsible for some of the alleged damage, it is elk not bison who are primarily responsible for such impacts. The agencies must also document what role, if any, their restoration activities (not including the construction of exclosures) can have on helping to recover these habitats, how extensive and active their restoration activities have been, and what additional habitat and/or bird species restoration strategies can be used to help recover such species.</p> <p><u>Impacts on Recreational Opportunities:</u> Depending on the alternative selected as the preferred alternative in the Final EIS, elk hunting on the NER and GTNP may continue, bison hunting on the NER may be initiated, or the agencies may elect to close both the NER and GTNP to elk hunting and to continue the prohibition against bison hunting on the NER.</p>	<p>17-56. There was considerable discussion throughout the Draft Plan/EIS on the reasons for the decline in woody vegetation on the National Elk Refuge. While the commenter is correct that other ecological factors can contribute to the decline, it has been thoroughly documented that overbrowsing by ungulates is impacting woody vegetation. Other than small, experimental exclosures of about 20 acres, along with some use of prescribed fire and invasive species control, no specific restoration activities have been undertaken to recover Neotropical bird species on the refuge. The agencies believe that the actions identified in the Draft EIS — reducing the size of the herds, reducing or phasing out feeding, constructing exclosures, using prescribed fire, restoring native plant communities, etc. — would improve habitat for Neotropical migratory birds. Specific details would be addressed in step-down management plans to be developed after this plan has been finalized.</p> <p>17-57, 17-58, 17-59. The agencies disagree that the social and economic impacts were not adequately analyzed with respect to bison and elk hunting. The Draft Plan/EIS fully acknowledged that some stakeholder groups and public are opposed to hunting (p. 17), and that acknowledgment led to the development of Alternative 2 (p. 42), which would not allow for hunting of either bison or elk.</p>
17-57	<p>Depending on the alternative selected the social and economic impacts may be significantly different. The agencies, however, have failed to accurately assess these impacts by: 1) failing to evaluate the social impacts of reinitiating a bison hunt on the NER to local, regional, and national stakeholders who oppose hunting for ethical and/or scientific reasons or who believe that non-lethal alternatives (i.e., fertility control, natural regulation) must be attempted before resorting to lethal control; 2) failing to evaluate the impact of reinitiating bison hunting on the behavior of individual bison and bison herd dynamics and how a change in bison behavior could adversely impact the summer visitor experience in GTNP and NER; 3) failing to evaluate the social impacts of continuing with elk hunting on the NER and/or within the GTNP to local, regional and national stakeholders who opposed hunting for ethical and/or scientific reasons or who believe that non-lethal alternatives (i.e., fertility control, natural regulation) must be attempted before resorting to lethal control; and 4) failing to comprehensively evaluate the economic impacts</p>	<p>Studies by Loomis and Koontz (2004) and Koontz and Hoag (2005) analyzed visitor preferences, including bison hunting, across three geographic areas, including Teton County, the State of Wyoming, and the rest of the United States for different management alternatives and actions (see Draft Plan/EIS, pp. 172–73, 177–78, 456–68, 475–81). The studies, which went through extensive peer review, found a strong correlation between stakeholder viewpoints and preferred management actions. The results of the studies were used in the development of the alternatives. Additionally, stakeholders have stated their preferences about hunting, as included in this volume of the Final Plan/EIS. Further assessment about the dynamic of hunting on an individual bison or the bison herd is unlikely to change the impact of summer visitor experiences in Grand Teton National Park. The likely impacts of the alternatives on wildlife viewing, including bison hunting, were discussed at length in the Draft EIS (pp. 447–56). Loomis and Koontz (2004) did not find that having a bison hunting program on the National Elk Refuge would lead to a change in visitors coming to the national park unless there</p>

Comment No.	Letter 17 (cont.)	Response
17-58	<p>of the continuation of elk hunting on the NER and GTNP and/or the initiation of bison hunting on the NER.</p> <p>The agencies completely failed to acknowledge that certain stakeholders are opposed to any effort to resume bison hunting on the NER and the continuation of elk hunting on the NER and/or the GTNP and neglected to consider the adverse impact that such hunts (as proposed under Alternatives 1 (elk hunting only), 3, 4, 5, and 6) would have on these stakeholders.¹⁵ Regardless of whether their opposition to hunting is based on ethics, science, a belief that national wildlife refuges should be inviolate sanctuaries for all wildlife, opposition to hunting in a national park, or a concern that all non-lethal strategies should be tried before resorting to lethal control, these interests are legitimate and must be evaluated. Such an evaluation cannot simply disclose that some stakeholders may not approve of bison hunting on the NER or elk hunting on the NER and GTNP but, rather, must consider how the resumption of bison hunting or the continuation of elk hunting could affect the stakeholder's interest in visiting the NER and GTNP after a hunting season has been established, their ability to enjoy the NER and GTNP, their support for national wildlife refuges and the national wildlife refuge system, their support for the national park system or GTNP in particular, the aesthetic injury to persons who may witness a bison being killed by a hunter, and how such a hunt would impact the "existence value" of bison on the NER for those stakeholders who have an interest in bison protection but who may not ever visit the NER or GTNP. The failure of the agencies to address such impacts may be indicative of their failure to recognize and acknowledge the significant and important interests of such stakeholders even though such interests may not be consistent with the interests of the agencies.</p>	<p>17-57, 17-58, 17-59 (cont.). were moderate to major changes in bison numbers (Draft Plan/EIS, p. 447). Further, the agencies discussed the expected changes in behavior in the analysis section on bison hunting (pp. 329–40).</p> <p>The agencies respectfully disagree that further analysis of the social aspects of hunting or wildlife viewing is necessary in order to adequately analyze the environmental impacts of the alternatives being considered. It would not change the viewpoints already expressed by the public. Presumably, in order to address the "existence or intrinsic values" for those who are opposed to hunting or never come to Jackson Hole, the experience of hunting, including the loss of that opportunity, would need to be valued too. The public and all stakeholder groups had an opportunity to express their values and viewpoints during the public comment period on the Draft Plan/EIS. The agencies have fully acknowledged those viewpoints in the Final Plan/EIS. Since the vast majority of comments received from stakeholders during scoping and the Draft EIS comment period supported both bison and elk hunting, it is inaccurate to say that the agencies failed to acknowledge the interests of stakeholders in the Preferred Alternative in the Final Plan/EIS. The agencies will base the final decision on which alternative best meets the goals of this Bison and Elk Management Plan/EIS, which are habitat conservation, sustainable populations of bison and elk, and reduction in the significant threats of disease.</p>
17-59	<p>The Draft EIS also fails to evaluate the impact of the resumption of hunting bison on the NER on the behavior of individual bison, herd behavior, and on the NER and GTNP visitor experience. The extent of the analysis in the Draft EIS was limited to the acknowledgement that "bison hunting on the refuge could also temporarily affect bison behavior and nutrition, as bison would be agitated and nervous, and expend additional energy avoiding hunters." Draft EIS at 324. While these impacts are legitimate, the initiation of a bison hunt on the NER may result in permanent changes in individual bison and bison herd behavior resulting in animals who are more skittish and fearful of humans. This, in turn, could lead to impacts on bison use of available habitat within the NER and GTNP possibly leading to alterations in bison movement, distribution, and habitat use patterns in order to avoid humans. While such impacts would not be relevant to the killed bison, because bison are so gregarious and tend to congregate in herds, the hunting and killing of one bison could increase the skittishness of multiple bison.</p>	<p>17-60. See responses 17-57 through 17-59. It is likely that some changes would occur in the movements and use of habitat by the bison herd if a hunting program was implemented on the National Elk Refuge. These impacts were disclosed as part of the impact analysis in the Draft Plan/EIS (pp. 311–40 under section headings "Distribution and Movements" and "Bison Behavior, Social Interactions, and Nutrition"). The Draft EIS discussed that hunting could increase nervousness and agitation of bison from avoiding hunters (p. 329). Currently winter visitors to the National Elk Refuge rarely have an opportunity to observe, photograph, or sketch bison because they are not visible from the road due to supplemental feeding (p. 453). Depending on the alternative, there could be more viewing opportunities during the winter months in a less artificial environment than what currently exists.</p>
17-60	<p>In a recent analysis of the environmental impacts of reestablishing a bison hunt in Montana, the Montana Department of Fish, Wildlife, and Parks concluded that a hunt will make bison more wary of humans and suggests that increased wariness will make bison</p> <p>¹⁵ The mere fact that the current hunt of bison that occurs on the Bridger-Teton National Forest has not generated the same level of controversy as bison management actions in Montana cannot be used to suggest that the resumption of bison hunting on the NER would not result in adverse impacts to the interests of certain stakeholders.</p>	

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17-60 (cont.)	<p>hunting more sporting and more consistent with the concept of “fair chase.” Unless Jackson bison are behaviorally different than Yellowstone bison, similar impacts have to be expected in the Jackson bison herd. While increased bison fear and skittishness around humans could increase the challenge of stalking a bison, it would also adversely impact the ability of NER and GTNP visitors to observe, photograph, sketch, or otherwise enjoy bison in the natural habitat. The agencies completely failed to even acknowledge this impact. A mere acknowledgement, however, is not a sufficient level of analysis. The agencies must go beyond admitting that the impact is real but must assess how a change in bison behavior to make bison less accessible to visitors could affect the visitor experience, whether visitors will return to the NER or GTNP if bison are more difficult to observe and enjoy. In addition, the agencies must consider how changes in bison behavior may impact their biology and ecology (i.e., movements, distribution, habitat use patterns, and productivity). There is considerable scientific evidence that the distribution, movements, and habitat use patterns of a variety of species can be drastically impacted by recreational activities including hunting, snowmobiling, and even hiking. Such impacts on the Jackson bison herd must be disclosed and evaluated.</p>	
17-61	<p>In addition, the agencies must consider the unsporting and unethical nature of its proposed bison hunt. These bison have spent the majority of their lives on the GTNP and NER where they have largely enjoyed complete protection. As a result, they have learned to trust humans and, in turn, humans have benefited by being able to more closely observe and enjoy bison in their natural habitat. Allowing hunting of a species that has been largely protected will, without dispute, be unsporting, unethical, and will fail to satisfy the standards of fair chase. The agencies must consider and discuss the ethics – or lack thereof – of bison hunting in the Draft EIS.</p>	<p>17-61. See responses 17-57 through 17-59. Currently, bison are hunted in the national forest. Working in cooperation with the Wyoming Game and Fish Department, the agencies believe that an “ethical” hunt based on “fair chase” concepts can be implemented on the refuge.</p>
17-62	<p>Finally, the agencies have failed to comprehensively evaluate the economic impacts of the continuation of elk hunting on the NER and GTNP and/or the initiation of bison hunting on the NER. As is inherent in most economic evaluations of proposed hunts, the agencies have limited their analysis to expected expenditures of local, non-local, and out-of-state hunters and how such expenditures will benefit the local and statewide economies and what the secondary impacts of bison and elk hunting will have on job creation.</p>	<p>17-62. Thank you for your comment.</p>
17-63	<p>The agencies failed, however, to consider other economic impacts of the proposed hunt that are just as legitimate as those affecting the economy and employment opportunities. Specifically, there is no calculation of the inherent economic value, including the ecological and aesthetic value, of the individual elk or bison killed and removed from the ecosystem. While quantifying such values may not be easy, an attempt must be made to establish an economic value for such intrinsic factors. In addition, the agencies must, preferably using a contingent valuation methodology, evaluate the economic impacts of elk and bison hunting on the interest of affected stakeholder groups who oppose hunting, oppose hunting on national wildlife refuges or national parks, and/or who believe that lethal control must only be used as a last resort in wildlife management. This evaluation must include an assessment of how hunting may affect the economic interest of stakeholders who are opposed to hunting in visiting the NER and GTNP, in visiting Wyoming, in their ability to enjoy bison and elk in their natural habitats, and the</p>	<p>17-63. See responses 17-57 through 17-59 regarding the assessment of value. The agencies disagree that additional valuation of stakeholder viewpoints is required to adequately assess the alternatives presented in the Draft Plan/EIS.</p>

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17-64	<p>existence value of elk and bison in NER and GTNP even if a stakeholder is never able to visit the area. Until such information is disclosed and an analysis completed, the Draft EIS will be incomplete.</p> <p>It should be noted that, while the analysis of social and economic impacts was woefully inadequate, none of the alternatives, excluding the No Action Alternative (Alternative 1), including Alternative 2, would result in any significant adverse impact to the local or statewide economies (.33% or less and .01% or less, respectively) or to the number of local or statewide jobs (.73% or less and .05% or less, respectively). Draft EIS at 476 -- Tables 4-14 and 4-15.</p>	<p>17-64. Thank you for your comment.</p>
17-65	<p><u>Impacts on Livestock Operations:</u> Though this analysis is ostensibly intended to evaluate the social and economic impacts of the proposed action and its alternatives on livestock operations, the majority of the discussion is devoted to a theoretical summary of the risk of disease (namely brucellosis) transmission from bison and elk to cattle. The only social impacts discussed are the changes in the perception of Wyoming livestock and the cattle industry (among potential customers and regulators) depending on the alternative selected. The only economic analysis provided is a description of the potential adverse impact of a brucellosis infection in a cattle herd, Draft EIS at 489, and a table documenting the production costs of a cow-calf operation. Draft EIS at 495 – Table 4-17. In neither case is the analysis sufficient.</p>	<p>17-65. The agencies believe that the economic analysis for livestock operations (Draft Plan/EIS, pp. 487–503) is sufficient to adequately disclose the effects of the alternatives. In the Final Plan/EIS, the economic data in the Draft EIS (p. 183) were updated with current information regarding the costs of brucellosis testing in Wyoming, as were the data in the impact analysis, including Table 4-17. Also see responses 17-67 and 17-68 below.</p>
17-66	<p>While it is unclear what constitutes a social impact of the proposed action to livestock operations, the summary of the risk of bacteria transmission was woefully inadequate in that the agencies, as stated previously, have failed to ever <u>quantify</u> the risk of transmission (emphasis added). Simply articulating whether and why a particular alternative will increase or decrease the risk of disease transmission from bison or elk to cattle is irrelevant as there is no meaningful way to understand the real implications of each alternative. Only with hard numbers to quantify all components of the risk equation can the decision-makers and the public appreciate how each alternative will potentially benefit or harm the individual livestock producer, and regional livestock cooperatives, and/or the state's livestock industry.</p>	<p>17-66. At the present time reliable quantitative data do not exist to analyze the risk of transmission of brucellosis by assigning a numerical factor, as the commenter suggests. The agencies believe the qualitative analysis was sufficient (Draft Plan/EIS, p. 129). As discussed in the Draft EIS on pages 128–29, 487–503, alternatives that reduce density are more likely to reduce the prevalence of brucellosis in elk and bison over time. Other management actions such as minimizing co-mingling with livestock the during elk and bison calving seasons can reduce the risk for transmission. Even if reliable data could be used to quantify the risk of transmission, the agencies disagree that it would change public appreciation of how each alternative would benefit the livestock industry in Wyoming. Despite the documented connection between increased prevalence of brucellosis as a result of increased densities on feedgrounds, the public and stakeholder groups have very differing opinions about the continued use of supplemental feeding.</p>
17-67	<p>As a result of the multitude of studies in the published literature and those awaiting publication, including recent studies of both the Yellowstone and Jackson bison herds, sufficient data is available to physically quantify the risk of transmission by assigning a numerical factor to all of the individual risk factors (<i>i.e.</i>, the number of female bison, the number of pregnant bison, the number of exposed and pregnant bison, the number of infected and pregnant bison...) that must be triggered to create the potential for a transmission event. If the public and decision-makers are expected to provide substantive comments on the content of the Draft EIS and to choose between offered alternatives, the agencies cannot continue to avoid preparing such an analysis, deferring such an analysis to a later date, or assuming that another agency or cooperative working group will perform</p>	<p>17-67. See response 17-66 regarding the lack of reliable data to quantify the risk of transmission. The agencies agree that public education is crucial to address understanding about diseases and risk for transmission in this planning process. The Preferred Alternative in the Final Plan/EIS emphasizes a public education objective to achieve the desired condition and goals in the Bison and Elk Management Plan.</p>

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17-67 (cont.)	<p>this task¹⁶ as such actions prevent a clear understanding of the implications of each alternative. While the results of such an assessment will likely demonstrate that the actual risk of transmission of brucellosis – which all agencies and organizations agree is low – fails to justify the heavy-handed practices and policies relied on, particularly in bison management, to reduce the risk.¹⁷ It is precisely that type of information that is crucial to the public understanding the alleged benefits and consequences of each alternative to address the risk of transmission. Considering that the agencies deem this risk to be “the most significant issue ... in terms of potential effects on agricultural production in the Jackson Hole area and Green River basin,” continuing to ignore this need is unacceptable and illegal.</p>	
17-68	<p>In preparing such an assessment, the agencies must ensure they use accurate information in defining each risk factor. For example, bison bulls, calves, yearling, and open females pose no risk of bacteria transmission. Only infectious pregnant bison or elk can theoretically transmit the bacteria. Transmission is only possible if: 1) an infectious pregnant elk or bison experiences a brucellosis-induced abortion or reproductive failure in an area occupied by cattle; 2) the fetus, dead calf, contaminated reproductive materials, and bacteria persist long enough in the environment to facilitate a transmission event; and 3) if a susceptible cow consumed a sufficient quantity of the bacteria to result in an infection. The risk of transmission can be further reduced by increasing the temporal and spatial separation between elk/bison and cattle.¹⁸</p>	<p>17-68. See response 17-66 about the quantitative risk assessment. The agencies believe that the most effective way to reduce the transmission risk is to reduce the high prevalence rate for brucellosis as a result of high densities caused by supplemental feeding. The agencies believe the Preferred Alternative in the Final Plan/EIS would reduce the risk of transmission over the life of the plan.</p>
17-69	<p>In elk, the risk as stated in the Draft EIS is further reduced based on the tendency of pregnant elk to isolate themselves prior to calving, their fastidious clean-up of the birth site as a predator avoidance strategy, behavioral differences between elk and cattle limiting their interactions, (Draft EIS at 488 citing Clause et al. 2002), and whatever aversion wild ungulates may demonstrate toward livestock (Draft EIS at 492 citing Zeigenfuss et al. 2003 and Wisdom and Thomas 1996). For bison, though they tend to give birth in groups, there is evidence that bison also clean-up their birth sites (pers. comm. with Dr. Tom Roffe regarding three pregnant bison from Yellowstone National Park who gave birth in captivity at Montana State University without leaving any evidence of the actual birth site) which the agencies failed to disclose in the Draft EIS. Ultimately, as the agencies are aware, there</p> <p>¹⁶ As indicated in the Draft EIS, the NPS and FWS intend to “continue to participate in these groups (Jackson Elk Studies Group and Greater Yellowstone Interagency Brucellosis Committee) to assess the risk for brucellosis transmission from elk or bison to livestock.” Draft EIS at x.</p> <p>¹⁷ The potential risk of brucellosis transmission from feedground elk to cattle will be higher – though still unlikely -- because a larger number of feedground elk have been exposed to the bacteria and are likely infectious and because, unlike the isolation behaviors demonstrated by all elk at calving, elk who experience a brucellosis-induced spontaneous abortion do not isolate themselves from other animals prior to the abortion event.</p> <p>¹⁸ The Draft EIS claims that each alternative includes a provision requesting that “current permittees ... modify their grazing practices so as to minimize the potential for contact between elk/bison and cattle, thereby minimizing the potential for disease transmission.” Draft EIS at 490. It goes on to claim that “permittees would be requested to delay turn-out dates and/or truck cattle between pastures where conflicts could occur.” These are useful strategies to further reduce the already low risk of bacteria transmission though their voluntary nature raises concerns that they may not be agreed to, implemented, or followed. The GTNP has and must utilize the authority to require that its permittees (persons authorized to graze cattle on GTNP lands) comply with such changes.</p> <p style="text-align: center;">22</p>	<p>17-69. See response 17-67 related to public education. Elk near the end of a pregnancy and elk giving birth may behave quite differently from elk aborting earlier in a pregnancy. During a study of Strain 19 vaccine efficacy (Roffe et al. 2004), the researchers noted that infected elk aborting earlier in their term rarely segregated from other elk, whereas normally calving and stillbirthing elk did (Roffe, pers. comm. 2006).</p>

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17-70	<p>has never been a confirmed case of brucellosis transmission from bison, including Jackson bison, to domestic livestock even though, as disclosed in the Draft EIS, Jackson bison and domestic cattle share common range in GTNP.</p> <p>Finally, in addition to preparing a substantive and quantitative risk assessment, the agencies must also quantify the economic impacts of the proposed action and its alternatives to the potentially affected livestock interests. The agencies simply failed to provide any such analysis in the Draft EIS. The information that must be disclosed would include, but would not be limited to, the economic cost of Wyoming losing its brucellosis-free status and/or failing to regain a free designation at a local, regional, and statewide level, the economic costs of brucellosis testing potentially borne by individual producers, whether any state or federal agencies provides any level of indemnity or reimbursement for such testing costs, and the costs associated with vaccinating domestic livestock. Such information is crucial to enable the public to understand the economic implications, significant or insignificant, of a brucellosis outbreak to an individual rancher and/or to Wyoming's livestock industry.</p> <p><u>ALTERNATIVE 2, AS AMENDED, MUST BE SELECTED AS THE PREFERRED ALTERNATIVE:</u></p>	<p>17-70. See responses 17-66 and 17-67 regarding the lack of published data on quantitative versus qualitative risk assessment and public understanding. Although difficult to assess, the brucellosis discoveries in Wyoming do not appear to have had a crippling effect on the cattle industry statewide, given that brucellosis testing and associated costs represent only a small portion of producer's annual production costs (Dolan, pers. comm. 2006). This information was updated in the Final Plan/EIS; see Chapter 3, "Social and Economic Conditions: Livestock Operations." It is estimated that cattle producers in Wyoming may spend an additional \$1.2 million to \$1.7 million per year to cover testing costs. Total testing costs are about \$11.50 per animal and represent about 1% of annual per animal production costs (this does not suggest all producers have experienced the same relative impact). It is not known how long surveillance will be required or whether future surveillance will continue for a portion of Wyoming cattle. It is speculative to predict economic impacts without knowing future surveillance requirements and how those impacts would be assessed for over 22 feedgrounds in Wyoming and on the National Elk Refuge.</p>
17-71	<p>As previously indicated, AWI and HSUS strongly support the selection of Alternative 2, as amended, as the preferred alternative in the Final EIS as it satisfies all of the laws, policies, goals, and management strategies applicable to the NER and GTNP and as delineated in the Draft EIS. In addition, by phasing out supplemental feeding (after 10 years) and reestablishing the role of natural factors in controlling the population dynamics, movements, distribution, and habitat use patterns of bison and elk, Alternative 2 provides the greatest benefit in the long-term (after 10-15 years) to elk, bison, other wildlife, and to the ecosystem of any of the alternatives evaluated in the Draft EIS. While emphasizing natural regulation, it allows for the continued irrigation of cultivated lands in the short term and the use of new chemical-based fertility control technologies on bison (and elk if determined to be safe, efficacious, and practical) on the NER and GTNP to expedite the reduction of bison (and elk) numbers to levels more consistent with a more natural management regime¹⁹ which, in turn, could expedite the cessation of supplemental feeding. Moreover, this alternative eliminates negative or adverse impacts inherent to elk and bison hunting on the NER and GTNP providing significant benefits to both species.²⁰</p> <p>¹⁹ While AWI is generally cautious in promoting the use of immuncontraceptive technologies, the artificiality of the current system which increases the significant threat of a major disease outbreak necessitates the use of non-lethal technology to effectively address these threats.</p> <p>²⁰ AWI is not opposed to all hunting under all circumstances. When addressing specific proposals that recommend hunting, the AWI evaluates the merits, scientific justifications, and alternatives to the hunt on a case by case basis. Generally, AWI believes that the intentional killing of a wild animal must only be done as a last resort and only under limited circumstances, must be performed in a manner that does not cause suffering, and should not be performed as a recreational pursuit. In this case, the AWI is opposed to both bison and elk hunting on the NER and GTNP because the agencies have failed to adequately evaluate all relevant impacts associated with these hunts (particularly the proposed bison hunt) and because there are – as disclosed in the Draft EIS – alternative means of effectively managing these populations without the use of sport hunting.</p>	<p>17-71. Thank you for your comment.</p>

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17-72	<p>The critical component of Alternative 2 is the elimination of supplemental feeding of elk and bison on the NER. This act, alone, will result in substantial benefits to the elk and bison populations, other wildlife species, and their habitats by forcing elk and bison to more naturally disperse across the landscape thereby reducing the significant threat of existing or new non-endemic and infectious diseases from entering and harming these populations. The supplemental feeding program, though originally initiated for valid reasons, is directly or indirectly responsible for nearly all of the adverse impacts addressed in the Draft EIS (i.e., habitat impacts, wildlife impacts, and the artificiality of the ecology of the elk and bison herds). The continuation of supplemental feeding over the long term, regardless of the frequency of such feeding efforts, is a recipe for disaster given the serious wildlife diseases (i.e., chronic wasting disease) literally on Jackson Hole's doorstep and considering the ongoing concern surrounding the theoretical risk of brucellosis transmission to domestic livestock.</p>	17-72. Thank you for your comments.
17-73	<p>The restoration of natural regulation as the primary factor controlling the elk and bison populations will not substantially increase natural winter kill. Suggested amendments to Alternative 2 would allow for the limited continuation of irrigation practices to increase forage production for the benefit of elk, bison, and other wildlife during a brief transitional period as the supplemental feeding program is phased-out. While there would be a minimal increase in natural winter kill – largely limited to severe winters – such impacts are natural, affect all free-ranging species, and would provide significant benefits to mammalian and avian predators, scavengers, detritivores, and soil microorganisms.</p>	17-73. Thank you for your comments.
17-74	<p>The Draft EIS provides ample support for the selection of Alternative 2 as the preferred alternative. Indeed, as revealed in the environmental consequences section of the Draft EIS, Alternatives 2 and 6 provide the most significant and long-term benefits to bison, elk, other wildlife, and the ecosystem. On page 304 of the Draft EIS, for example, the agencies state that Alternatives 2 and 6 “would result in higher levels of long-term health, sustainability, and naturalness in the Jackson elk herd than what would occur under Alternatives 3, 4, and 5.” Similarly, the agencies concede that Alternatives 2 and 6 “would result in higher levels of long-term health, sustainability, and naturalness in the bison herd than what would occur under Alternatives 3-5.” Draft EIS at 323. In assessing the relative impact of each alternative on reducing the risk of disease transmission, the Draft EIS concludes that Alternatives 2 and 6 provides the lowest “risk of a non-endemic infectious disease quickly spreading though the herd ... of any of the alternatives due to the elimination of the nearly annual winter feeding program and fewer bison and elk.” Draft EIS at 340. Moreover, Alternatives 2 and 6 “would have the lowest risk of such a disease having major adverse impacts to survival and population sustainability.” Draft EIS at 340.²¹</p> <hr/> <p>²¹ See also: Draft EIS at 367 (Alternatives 2, 3, and 6 “would have the least amount of adverse impacts to other ungulates on the refuge...”); Draft EIS at 367 (Alternatives 2 and 6 “would have the lowest potential for adverse impacts to other ungulate populations in the park.”); Draft EIS at 376 (Alternatives 2, 3, and 6 “would have the largest amount of riparian and aspen woodland habitat available to mule deer and moose on</p>	17-74. Thank you for your comments.

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17-75	<p>Finally, Alternative 2 is entirely consistent with the legal mandates governing the management of both the NER by the FWS and GTNP by the NPS as disclosed in the Draft EIS, Draft EIS at 13-16, and as further delineated in the National Park Service Organic Act, the National Wildlife Refuge System Administration Act as amended by the National Wildlife Refuge System Improvement Act, and related regulations and policies. Furthermore, Alternative 2 is also consistent with the management goals contained in the Draft EIS. Draft EIS at 32-34.</p> <p><u>COMPATIBILITY DETERMINATIONS:</u></p>	17-75. Thank you for your comment.
17-76	<p>In addition to soliciting comment on the Draft EIS, the FWS and NPS also requested public review and comment on several compatibility determination appended to the Draft EIS. These determinations are required by the National Wildlife Refuge System Administration Act, as amended, and must be completed to ensure that public uses of the refuge system are compatible with the primary mission and/or purpose of the system and individual refuges. Two of the proposed compatibility determinations pertain to elk and bison hunting on the NER.²² Because elk hunting has been conducted on the NER for decades, the publication of a draft compatibility determination on elk hunting either reflects a decision to revisit an out-of-date compatibility determination or is evidence that the FWS neglected to prepare such a determination in the past.</p>	17-76, 17-77. The commenter did not identify the specifics of why the compatibility determinations are inadequate. The U.S. Fish and Wildlife Service respectfully disagrees that the inclusion of the draft compatibility determinations is premature or suggests a predetermined outcome. The USFWS "Compatibility Policy" (2000b) requires new compatibility determinations with the revision of a comprehensive conservation plan, or if the use changes significantly, or every 15 years. Some of the activities or uses for which draft compatibility determinations were included in the Draft Plan/EIS would be new uses or significant changes to current programs, and these were finalized based on public review and/or other changes made to the Preferred Alternative in the Final Plan/EIS. There would be a few significant changes to the elk hunting program, including opening the southern portion of the refuge to elk hunting and increasing harvest levels in the short term. The policy encourages public review when a draft plan is published. The USFWS planning policy (2000a) has been adhered to in the preparation of this plan. The planning policy also requires the preparation of draft compatibility determinations on the proposed action so that the public has an opportunity to provide input during the review of the draft document.
17-77	<p>While the content and analysis contained in each compatibility determination are inadequate and must be corrected, the very publication of these determinations at this time is premature and suggests that the FWS has predetermined the outcome of the EIS process in violation of federal law. Without completing the EIS process, it is impossible (assuming the process is objective) to determine what alternative will be selected as the preferred action. When the EIS process is complete and the FWS and NPS have selected a management strategy to implement on the NER, it must then prepare, publish, and solicit public comment on the appropriate compatibility determinations. Because the very issuance of the draft compatibility determinations is premature, there is no reason to provide a more detailed critique of these documents at this time. AWI welcomes the opportunity to review and comment on whatever compatibility determinations are deemed to be required once a final decision is made regarding the Draft EIS.</p> <p><u>CONCLUSION:</u></p> <hr/> <p>the refuge..."); Draft EIS at 377 (Alternatives 2 and 3 "would have the lowest risk of any of the alternatives in terms of the severity of an outbreak of a non-endemic infectious disease in the elk or bison herd that could adversely impact the population health of other ungulates."); Draft EIS at 436 ("in the long term the potential risk of disease transmission to humans would be lower under Alternative 2 than any other alternative because of eliminating hunting and winter feeding.")</p> <p>²² The National Wildlife Refuge System Improvement Act does not require the FWS to allow all wildlife dependent recreational uses, even if determined to be compatible, on all refuges. Indeed, the Secretary, when he or she determines that a proposed wildlife-dependent recreational use is a compatible use, the activity <u>should be</u> -- but is not required to be -- allowed subject to such restrictions or regulations as may be necessary, reasonable, and appropriate.</p> <p style="text-align: center;">25</p>	

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17-78	<p>For the foregoing reasons, the Draft EIS is in need of substantial restructuring and improvement to provide the legally required level of analysis of this important wildlife management issue. The agencies have simply failed to properly define the scope of the EIS, to disclose all relevant information, and to objectively evaluate the full range of environmental impacts of the proposed action and its alternatives. The agencies must correct these deficiencies preferably in a new EIS or, at a minimum, in a supplement to the Draft EIS, solicit additional public input on the revised and improved document, and then render a final decision.</p>	17-78. The agencies disagree with the reviewer's conclusion that the scope of analysis was not adequately defined (see Draft Plan/EIS, p. 23), that the relevant information was not disclosed, and that the impacts were not objectively evaluated.
17-79	<p>If the agencies ignore the obvious inadequacies in the Draft EIS and elect to finalize the document, they must select Alternative 2, as amended, as the preferred action as it will effectively address and resolve the many issues and impacts of concern while providing significant benefits to elk, bison, other wildlife, and wildlife habitats in the ecosystem. Its call for the phase-out of supplemental feeding on the NER is the single most significant action that must be taken to minimize the potential for a non-endemic, infectious disease to devastate bison, elk, and other wildlife populations in the Jackson Hole area.</p> <p>AWI appreciates the opportunity to submit these comments.</p> <p>Sincerely,  D.J. Schubert Wildlife Biologist</p> <div data-bbox="814 1138 1077 1304" style="text-align: center;">  </div>	17-79. Thank you for your comments. The Preferred Alternative in the Final Plan/EIS was modified to clarify specific actions and adopt an adaptive management approach to manage the bison and elk populations into the future.