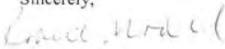


Comment No.	Letter 18	Response
	<div style="text-align: center;">  <p>FOUNDED IN 1887 BY THEODORE ROOSEVELT</p> <hr/> <p>BOONE AND CROCKETT CLUB</p> <hr/> <p>ROBERT MODEL PRESIDENT</p> </div> <p>December 13, 2005</p> <p>Jackson Bison and Elk Management Planning Office Attn: Laurie Shannon PO Box 510 Jackson, Wyoming 83001</p> <p>Dear Ms. Shannon:</p> <p>18-1 I support Alternative 5 for the Bison and Elk Management Plan and Environmental Impact Statement. Alternative 5 is the best for the local economy, the wildlife herds, and the sportsmen of the west. As President of the Boone & Crockett Club, our country's oldest conservation organization (founded by President Theodore Roosevelt), it is imperative that we make our views known regarding the Bison/Elk Management Plan.</p> <p>18-2 I am a landowner, rancher and permittee on the national forest in northwestern Wyoming. The public lands of the west are one of our greatest treasures. Many western politicians are so opposed to more federal lands and more federal programs. Unfortunately, this is yet another example of the federal government recommending a plan (Alternative 4) that is out of touch with the local people, the local economies, and even the national interests.</p> <p>18-3 As a representative of the organization that helped establish the Refuge System in 1912, to do anything other than Alternative 5 would be a violation of the public trust that has existed for 100 years.</p> <p>Sincerely,  Robert Model President Boone & Crockett Club</p> <div style="text-align: center;">  </div> <hr/> <p>Mooncrest Ranch • P.O. Box 158 • Cody, WY 82414 • 307/587-3620 • FAX 307/587-3995 • B&C Headquarters 406/542-1888</p> <hr/> <p>TRAILBLAZERS IN CONSERVATION, FAIR CHASE IN HUNTING, AND SHARED USE OF NATURAL RESOURCES</p>	<p>18-1. Thank you for your comment.</p> <p>18-2. Priorities differ greatly among stakeholders, and the wishes of the public — both locally and nationally — have been diverse. Alternative 4 in the Draft Plan/EIS (which has been modified in the Final Plan/EIS) is a moderate alternative that attempts to strike a balance between stakeholder wishes and the need to manage the bison and elk populations in accordance with accepted wildlife management principles.</p> <p>18-3. Offering alternatives to sustain a healthy population of bison and elk and to reduce disease concerns in order to meet the mandates of the National Wildlife Refuge System Improvement Act of 1997 and the NPS Organic Act of 1916 as required by law would not violate the public trust.</p>



Foundation for North American Wild Sheep

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US FISH AND WILDLIFE SERV.
CHEYENNE, WY

September 8, 2005

Mr. Brian Kelly
U.S. Fish & Wildlife Services
4000 Airport Parkway
Cheyenne, WY 82001

Dear Mr. Kelly :

The Foundation for North American Wild Sheep strives to enhance wild sheep and other wildlife populations, promote professional wildlife management, and educate the public about wild sheep.

We would like to ensure that the wild sheep and other wildlife within the Jackson Hole National Elk Refuge are given careful consideration under current environmental laws. This area, in particular, aligns human economic and cultural values with animal welfare.

As the alternatives to the Bison and Elk Management Plan and EIS are being considered, the Foundation for North American Wild Sheep encourages you to utilize the best available science to reach your decision.

Sincerely,

Raymond J. Lee
President



"Putting Sheep on the Mountain" - National Headquarters & Local Chapters Working Together

Alaska • Alberta • California • Eastern States • Idaho • Iowa • Montana
Minnesota/Wisconsin • New Mexico • Oregon • Utah • Washington • Wyoming

19-1

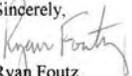
19-2

19-3

19-1. Thank you for your comments.

19-2. The Draft Plan/EIS analyzed impacts to wild sheep and other wildlife. These impacts will be carefully considered during the decision-making process.

19-3. The agencies used the best available science to analyze impacts of the alternatives, and the final decision will be made based on these analyses.

Comment No.	Letter 20	Response
	 <p data-bbox="268 349 424 393">226 North Deerbollow Circle North Salt Lake, Utah 84054 (801) 243-9882</p> <p data-bbox="682 414 814 435">October 22, 2005</p> <p data-bbox="352 500 739 587">Jackson Bison and Elk Management Planning Office Attn: Laurie Shannon PO Box 510 Jackson, Wyoming 83001</p> <p data-bbox="142 641 193 662">20-1</p> <p data-bbox="352 625 961 690">The Utah Chapter of the Foundation for North American Wild Sheep (UFNAWS) supports alternative 5 for the Bison and Elk Management Plan and Environmental Impact Statement.</p> <p data-bbox="352 706 997 771">The bighorn sheep herds around Jackson are already struggling, and the populations of bighorn according to the local Game and Fish biologists are down significantly over the past several years.</p> <p data-bbox="142 803 193 824">20-2</p> <p data-bbox="352 787 1008 852">Eliminating feeding of elk and bison on the Jackson refuge would force more elk and bison out onto surrounding winter ranges, which are limited. This would result in further decline, or even elimination of bighorn sheep herds in the Jackson area.</p> <p data-bbox="352 868 1003 933">It is hard to even imagine the Service would recommend an action that would have such negative impacts to wildlife herds in the Jackson area. Alternative 4 is not acceptable to the sportsmen of the west.</p> <p data-bbox="352 950 835 982">Please keep me posted on further decision regarding this manner.</p> <p data-bbox="352 998 541 1107">Sincerely,  Ryan Foutz President, Utah FNAWS</p> 	<p data-bbox="1138 641 1486 662">20-1. Thank you for your comments.</p> <p data-bbox="1138 803 1936 933">20-2. Many elk would continue to forage on refuge winter range and on refuge cultivated areas, where improved techniques would provide better quality forage than current cultivation provides. 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.</p> <p data-bbox="1138 950 1957 1237">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. 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>

Comment No.

Letter 21

Response

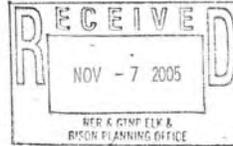


Greater Yellowstone Coalition

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November 7, 2005

Ralph Morgenweck, Director, Region 6, USFWS
Michael D. Snyder, Acting Director, Intermountain Region, NPS
Laurie Shannon, Project Manager, USFWS



Ladies and Gentlemen:

21-1

Please accept these comments from the Greater Yellowstone Coalition regarding the Draft Bison and Elk Management Plan and Environmental Impact Statement for the National Elk Refuge and Grand Teton National Park (DEIS).

21-1. Thank you for your comments.

21-2

Since 1983 the members, organizations, businesses, and families that comprise the Greater Yellowstone Coalition (GYC) have vigorously advocated for healthy, free-ranging herds of big game throughout the Greater Yellowstone Ecosystem (GYE). We have maintained an interest in previous management plans for wildlife that exist in and migrate across Grand Teton National Park (GTNP) and the National Elk Refuge (NER) and have participated in all stages of public process involving this DEIS. GTNP and the NER comprise lands that are integral to the ecological integrity of the GYE and our members value and use both GTNP and the NER and surrounding public lands and resources.

21-2. Thank you for your comments.

21-3

The National Park Service (NPS) and the U.S. Fish and Wildlife Service (FWS) are to be commended for undertaking this monumental effort to formulate a plan to manage bison and elk in Grand Teton Park and the National Elk Refuge in Jackson Hole, and to manage the habitats that support elk, bison, and other species. This is a once-in-a-lifetime opportunity to determine what is right and what needs changing, to define current conditions and to draft alternative management scenarios and analyze potential impacts, and to seek public input. And then make the right decisions. It is also an opportunity for the agencies to look within their own bureaucracies and remind themselves and the public about their legal directives that guide the management of some of the most cherished landscapes and wildlife populations in America. The public expects the NPS and the FWS to successfully and lawfully manage these resources so that future generations may enjoy what is so special about this part of our federal lands and wildlife heritage. We appreciate the opportunity to offer our comments and recommendations.

21-3. Thank you for your comments.

21-4

The USFWS and the NPS have noted that their decisions must be supported by expert opinion, sound professional judgment, available science and resources, and must adhere to applicable laws (DeLong 2005:5). The USFWS "is required to base management decisions on sound principles of wildlife management and available scientific information (USFWS 2000b, sec. 602 FW 1.3). The service must "use planning and sound professional judgment to determine prudent limits to densities" (USFWS2001 sec. 601 FW 3.14.E). Sound professional judgment is defined as a determination that is consistent with principles of

21-4. See response 21-14 with respect to the DeLong reference.

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Wyoming Office —330 E. Snow King, P.O. Box 4857, Jackson, WY 83001 • Phone (307) 734-6004 • Fax (307) 734-6019

95

Organizations

Comment No.	Letter 21 (cont.)	Response
21-4 (cont.)	<p>sound wildlife management and administration, available science and resources, and adherence to the requirements of applicable laws (16 USC 668ee(3))." Further, "the National Park Service is required to "integrate the best available science" into management plans (16 USC 5936; NPS 200b, sec. 4.1.1)" (DEIS:16).</p>	
21-5	<p>Our comments will include references from, and copies of, a variety of sources including the DEIS itself, expert reports, agency staff reports, minutes from agency meetings, documents obtained through requests to agencies, and other printed and electronic materials. With the exceptions of the DEIS, executive orders, federal agency policies, the Code of Federal Regulations, and some other sources noted in the reference section at the end of these comments, copies of some referenced materials will be attached to these comments and should be noted as such by the receiving agencies, included in the public record, and considered as supporting information for our comments and recommendations to the management agencies.</p> <p style="text-align: center;"><u>Building on Conservation Successes in Jackson Hole</u></p>	21-5. See response 21-14 with respect to noted sources.
21-6	<p>There have been many conservation successes in the Jackson Hole area over this past 133 years, and the management plan arising from this analysis may yet be another. The designation of Yellowstone National Park in 1872 was the beginning of a nation-enhancing legacy of conservation efforts in this region. In the early 1900's homesteaders in Jackson Hole then took steps to save the last herds of elk from extirpation, the last bison were saved at about the same time in Yellowstone, and a half-century later bison were transplanted into Jackson Hole thus starting another bison herd in the GYE.</p>	21-6. Thank you for your comments.
21-7	<p>As early as 1919 the nascent US Forest Service took steps to protect big game winter range in Jackson Hole and the Gros Ventre Valley by significantly cutting back the level of use by domestic livestock on designated winter ranges during the growing season, thus saving critical forage for wintering big game. In recent decades the USFS has also curtailed human disturbance of some big game winter ranges to allow the wildlife to remain undisturbed on those ranges during the harsh winter months.</p>	21-7. Thank you for your comments.
21-8	<p>Nowadays, for reasons as diverse as the passing of the human generations, economic pressures, and the difficulty of raising livestock in a harsh climate there are far fewer livestock on the public range in the Jackson Hole area. While some of the loss of ranching has unfortunately resulted in excessive residential and commercial development in key wildlife habitats, these changes have also resulted in fewer livestock/wildlife conflicts in other areas resulting in a benefit to wildlife. In fact Grand Teton Park and the Elk Refuge are on some lands that used to hold livestock, houses, gardens, and stored or cultivated crops; now those same lands are largely given over to wildlife habitat and open spaces.</p>	21-8. Thank you for your comments.
21-9	<p>Large carnivores including grizzly bears, cougars, and gray wolves have been protected or restored into the GYE in recent decades, and are evident in the Jackson Hole area and are contributing to a more intact natural system.</p>	21-9. Thank you for your comments.

Comment No.	Letter 21 (cont.)	Response
21-10	<p>Without those conservation successes dating back to 1872 there likely would not be a need today for an Elk and Bison Management Plan in Jackson Hole, because there would perhaps not be the elk and bison we have. These past successes define and enhance the quality of the lives of residents and visitors in this portion of the Greater Yellowstone Ecosystem and it is on this foundation that this plan has the opportunity to take its place among the preeminent milestones in our nation's conservation heritage. Only a decision by the National Park Service and the US Fish and Wildlife Service remains to capitalize on the excellent science and planning which this opportunity brings forth, and that decision will set the course for the future. This is a chance not only to build on previous work, but to correct some errors of the past in the same manner that modern carnivore protection and restoration, and an enlightened fire management policy use updated science to correct past failures or deficiencies. The NPS and FWS need to choose and improve on Alternative 6 and the course of wildlife conservation in Jackson Hole will be clearer and more sustainable.</p>	21-10. Thank you for your comment.
21-11	<p>Summary of GYC Recommendations</p> <p>The proposed Alternative 4 in the DEIS does not comply with all necessary federal laws and regulations for the USFWS and the National Park Service and thus does not allow the agencies to fulfill their legal directives. Alternative 6 is the best Alternative to incorporate into the decision arising from this analysis, and this alternative with some improvements noted herein must be implemented sooner than the 5 year timeframe in order to bring the National Elk Refuge and Grand Teton Park into legal compliance at the earliest opportunity. In light of existing and potential wildlife diseases, accomplishing the elements of Alternative 6 such as decreasing big game densities, ceasing feeding, and undertaking habitat improvements <i>sooner</i> than the five year timeframe will allow the agencies to fulfill their legal directives and protect the resources at the earliest possible time.</p>	21-11. The U.S. Fish and Wildlife Service and the National Park Service disagree that Alternative 4 in the Draft Plan/EIS does not comply with all necessary federal laws and regulations applying to the two agencies. See responses 21-14, 21-20, 21-28, and 21-30 on legal directives and modifications made to Alternative 4 in the Final Plan/EIS.
21-12	<p>The bison population in the Jackson Elk Herd area should not be managed down to an average of only 400 animals. Bison should be managed in this area at an average of 650 animals with a wider geographic distribution than currently occupied during the winter. Bison and elk distribution should be managed through sport hunting, natural predation, habitat carrying capacity, and other natural influences. No vaccinations for protection against brucellosis for elk or bison should be administered in GTNP or on the NER until an effective and non-intrusive vaccine is developed, and not until an up-to-date full analysis of potential impacts arising from a vaccination program has been conducted with full public participation.</p>	21-12. Alternative 6 was modified in the Final Plan/EIS to be more consistent with Alternative 4 (Draft Plan/EIS) for bison population objectives. The Preferred Alternative in the Final EIS would adaptively manage the bison herd based on what monitoring shows the habitat would support, and the agencies would recommend a population objective of approximately 500 animals. A vaccination program would not be administered in Grand Teton National Park under any alternative. The agencies believe that the use of Strain 19 was adequately analyzed in the Draft EIS (pp. 285, 499). The Preferred Alternative was modified in the Final EIS to allow the use of Strain 19 by WGFD personnel on the National Elk Refuge until logistics would prevent its effective deployment or other effective vaccines were found. Further, the Preferred Alternative would not preclude the use of effective vaccines for bison. See response 21-30 on other modifications to Alternative 4.
21-13	<p>While we recognize that it is outside the geographic jurisdictions of the GTNP and the NER we recommend that the NPS and FWS work with the WGFD and USFS in order that feeding at the three Wyoming Game and Fish Department operated elk feedgrounds in the Gros Ventre Valley should cease simultaneously or as close as possible with ceasing feeding on the NER in order for the elk in the entire Jackson Elk Herd (JEH) to become truly free-ranging and to not crowd onto any remaining agency operated feed lines within the Jackson elk herd unit area. Also added to Alternative 6 should be the component of Alternatives 2 and 3 for the NPS and FWS to support stakeholder efforts regarding protection and restoration of big game migrations out of Jackson Hole.</p>	21-13. Closing down the feedgrounds in the Gros Ventre River drainage is not an alternative being considered in this EIS, nor is it a reasonably foreseeable activity being considered by the Wyoming Game and Fish Department at this time.

Comment No.	Letter 21 (cont.)	Response
	<p><u>Fulfilling Legal Directives and Comparison of the Alternatives in the DEIS</u></p>	
21-14	<p>The USFWS is required to maintain biological integrity and environmental health on national wildlife refuges (16 USC 668dd(a)(4)(B)). Biological integrity is defined in policy as the "Biotic composition, structure, and functioning at genetic, organism, and community levels comparable with historic conditions, including the natural biological processes that shape genomes, organisms, and communities;" and environmental health is defined as the "Composition, structure, and functioning of soil, water, air, and other abiotic features comparable with historic conditions, including the natural abiotic processes that shape the environment," (USFWS 2001:601 FW 3.6B-C) (DeLong 2005:14).</p>	<p>21-14. The legal directives as laid out in the Draft Plan/EIS (pp. 11–16) are cited to specific laws or policies. Copies of these laws or policies can be obtained at the National Elk Refuge headquarters in Jackson, Wyoming; at Grand Teton National Park headquarters in Moose, Wyoming; or at <www.fws.gov/policy> or at <www.nps.gov/applications/npspolicy/index.cfm>.</p> <p>The reviewer's references to DeLong 2002, 2004, 2005 were sections from earlier drafts written by DeLong. As part of the evolution of the Draft Plan/EIS, several iterations were written before it was approved for publication by the agencies and the Department of the Interior. Most of the information contained in those earlier review drafts was consolidated or referenced in the published Draft EIS, which is encouraged in the National Environmental Policy Act. The Final Plan/EIS discloses the agencies' final analysis of a range of management alternatives, and it supersedes prior documents. The agencies will not comment on any assertions or citations from earlier versions of the document, as the material was neither peer reviewed nor approved for publication as a stand-alone report.</p>
21-15	<p>The fundamental mission of the Refuge system is wildlife conservation (16 USC 668dd(a)(2); House of Representatives 1997:Section 5). "Conservation" in this context means to "... sustain and where appropriate, restore and enhance healthy populations of fish, wildlife, and plants . . ." (16 USC 668ee(4)). The term "sustain" indicates that health is to be maintained over the long term. This is to be done to the extent it would not result in conflicts with refuge purposes (16 USC 668dd(a)(4)(D)). There is no indication that fulfilling the Refuge System mission with respect to elk and bison on the NER would conflict with refuge-specific purposes. Moreover, efforts to fulfill the Refuge System mission would also help to fulfill refuge purposes. (DeLong 2005:27)</p>	<p>21-15. See response 21-14 with respect to legal directives and the DeLong reference.</p>
21-16	<p>USFWS policy declares that the NWRSA " . . . clearly establishes that wildlife conservation is the singular National Wildlife Refuge system mission " (601 FW 3.7.A). Thus, wildlife conservation takes precedence over all other refuge uses and issues related to management and management planning. Again, "conservation," with respect to wildlife, means to sustain healthy populations of wildlife (16 USC 668ee(4)) (DeLong 2002:2.3).</p>	<p>21-16. See response 21-14 with respect to legal directives and the DeLong reference.</p>
21-17	<p>The NPS and Department of Interior are required to leave park resources unimpaired for future generations (16 USC 1, as amended) and, as noted in policy, "The Secretary has absolute duty, which is not to be compromised, to fulfill the mandate of the 1916 Organic Act to take whatever actions and seek whatever relief as will safeguard the units of the national park system." This directly applies to impairment requirements (NPS 2000:1.1.4.2). This responsibility can extend outside of park boundaries and may include management of the NER to the extent management actions on the refuge have the potential to impair park resources (based on U.S. Department of the Interior Solicitor 1998) (DeLong 2005:39). Therefore, not only is the NPS bound by the nonimpairment standard in their mission, the management of the NER may not adversely affect or impair park resources.</p>	<p>21-17. See response 21-14 with respect to legal directives and the DeLong reference. Impairment of park resources is addressed under each impact topic in the Draft and Final EISs.</p>
21-18	<p>The fulfillment of missions, accomplishing of purposes, and other legal directives for the NPS and FWS must not be impinged upon by management activities implemented on those jurisdictions by those or other agencies. The agencies must not be prevented from accomplishing what they are legally bound to accomplish pertaining to management of elk and bison or other wildlife species and all habitats.</p>	<p>21-18. The agencies believe that the Preferred Alternative in the Final Plan/EIS fulfills the mission, purposes, and other legal directives of the National Park Service and the U.S. Fish and Wildlife Service.</p>

Comment No.	Letter 21 (cont.)	Response
21-19	<p>Because there are no legal requirements to provide supplemental feed or to sustain any particular population level of elk or bison on the NER and because the requirement to contribute to state conservation plans is subservient to the accomplishment of refuge purposes and mission-related directives, the conservation of native fish, wildlife, and plant species and the maintenance and restoration of biological integrity, diversity, and environmental health must come first (DeLong 2005:70). If a management objective [such as feeding 5,000 – 7,000 elk] does not have a sound basis in law and policy and is not consistent with sound principles of wildlife management and scientific information (see DeLong 12/18/04), it cannot be expected that on-the-ground management in support of the particular objective would be consistent with legal directives or that establishing purposes and missions are being met. Despite what may have occurred in recent or historical management of either the GTNP or the NER, nothing diminishes or abrogates the agencies' responsibility to meet substantive requirements of law and policy (DeLong 2005:2).</p>	<p>21-19. See response 21-14 with respect to the DeLong references. The National Wildlife Refuge System Improvement Act of 1997 does not specifically state that “contributing to state conservation plans is subservient to the accomplishment of refuge purposes and mission-related directives.” The act states in Section 5(4)(E) that in administering the system, “the Secretary shall ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the States in which the units of the System are located.”</p>
21-20	<p>As noted in the DEIS Table 2-8, page 82, Alternative 6 rates far higher in “the ability of the U.S Fish and Wildlife Service and National Park Service to fulfill legal directives” and other criteria than the proposed Alternative 4, and Alternative 6 ranks better than each of the other Alternatives in the potential long-term impacts relative to legal directives, wildlife management principles (see DeLong 2004 for a discussion of Wildlife Management Principles), WGFD herd objectives, and socioeconomic considerations. In Tables 2-5, 2-6, and 2-7 (DEIS:81-82) Alternative 6 ranks consistently better than all other Alternatives in meeting NPS and FWS missions, goals, purposes, and directives. Although we note that there appears to be scant description of each alternative’s ability to fulfill agency legal directives in Tables 2-5 and 2-6, (tables with footnotes do not adequately serve as descriptions) and we suggest that the agencies consider in full DeLong’s <i>Potential Effects of Management Alternatives of the Bison and Elk Management Planning Document/EIS on the Ability of the U.S. Fish and Wildlife Service and National park Service to Fulfill Legal Directives, 7/7/04</i>, and append this document to the decision arising from this DEIS. While the agencies are required to consider various types of stakeholder perspectives and preferences, and they needed to analyze alternatives that incorporated winter feeding and the issues raised by some stakeholders during scoping, they may not select those alternatives as lawful management plans if they prevent the agencies from fulfilling their legal directives. Alternative 6 is clearly the best Alternative for the agencies to implement, and we will herein recommend some slight changes that will improve Alternative 6 in its ability to allow the FWS and NPS to best fulfill legal directives and to best manage and safeguard wildlife and habitat.</p> <p>Purpose and Need</p>	<p>21-20. See response 21-14 with respect to legal directives and the DeLong references. As described in the Draft Plan/EIS in Tables 2-7 and 2-8 (p. 82), some alternatives meet the management goals and legal directives better than others, but all the alternatives were developed with considerable thought as to what actions (objectives) would be required to achieve the goals and legal directives. Other options were considered but were found to be not feasible and are described in the Draft EIS (pp. 73–76) and in the Final Plan/EIS. The agencies described the impacts associated with each alternative, including the Preferred Alternative in the Final EIS. With respect to the National Elk Refuge, Section 5(a)(4)(D) of the National Wildlife Refuge System Improvement Act states, “the Secretary shall ensure that the mission of the System and the purposes of each refuge are carried out, except that if a conflict exists between the purposes of a refuge and the mission of the System, the conflict shall be resolved in a manner that first protects the purposes of the refuge, and, to the extent practicable, that also achieves the mission of the System.” All alternatives inherently meet the purposes of the National Elk Refuge and Grand Teton National Park, as well as the requirements of the National Environmental Policy Act. The agencies believe that the alternatives identified in the Draft and Final EISs are reasonable alternatives and that any one could be implemented. Alternative 4 (the agencies’ Preferred Alternative) was modified in the Final EIS to include more emphasis on adaptive management to achieve desired conditions, to mitigate conflicts, to develop criteria, and to establish a dynamic framework for reducing feeding. See also responses 21-12, 21-28, and 21-30.</p>
21-21	<p>While this planning effort and DEIS may analyze options for managing elk and bison for the next 15 years, it must also enable GTNP and the NER to meet legal obligations, address problems related to high animal concentrations and the concomitant effects on habitat, and enable the agencies to take advantage of unmet opportunities (DEIS:v). As we note above, certain management actions in place by the agencies have not allowed the agencies to fully comply with legal directives nor to manage the resources sustainably.</p>	<p>21-21. Comment noted.</p>

Comment No.	Letter 21 (cont.)	Response
21-22	<p><u>Wildlife and Habitat Health</u></p> <p>Population health is central to the mission of the Refuge System. In addition to characterizing healthy conditions as the ability to recover from normal stresses, Karr (2000:211) also characterized healthy conditions as requiring minimal outside care. Thus, an intent of the goal (Goal 2: Sustainable Populations) is that "resilience to normal disturbance" means that the elk and bison populations themselves have the ability to recover after a disturbance and that the populations do not rely upon direct human intervention (e.g., vaccination) to "recover" or "maintain" population health – the USFWS views [as] the highest level of biological integrity of wildlife populations those populations that are intact and self sustaining (USFWS 2002:620 FW 1.7.D) (in DeLong 2005:27).</p>	<p>21-22. See response 21-14 with respect to legal directives and the DeLong reference.</p>
21-23	<p>If direct human intervention (e.g., vaccination) is being used to maintain a low level of a particular disease in a wildlife population, this means that the conditions under which the population persists are unhealthy and, ultimately, that health of the wildlife population is diminished. If a wildlife population is maintained under unhealthy conditions (excessive densities for a portion of the year), its ability to rebound after the introduction of a new disease (e.g. chronic wasting disease) can be diminished if the unhealthy conditions are not remedied (Peterson 2003 in DeLong 2005:28).</p>	<p>21-23. See response 21-14 with respect to legal directives and the DeLong reference. Peterson (2003) was referenced where appropriate in the Draft Plan/EIS (p. 585), and a copy of the report is on file at the National Elk Refuge headquarters.</p>
21-24	<p>As characterized in 50 CFR 100.4, management aimed at conserving healthy wildlife populations "minimizes the likelihood of irreversible or long-term adverse effects upon populations and species". It is part of a definition contained in regulation; it is consistent with published literature on ecological health; and it reinforces some of the important characteristics of wildlife population health. Minimizing risks of irreversible or long-term adverse impacts in part means reducing, to the extent possible, the conditions that could exacerbate disease problems in wildlife populations. Minimizing risks of irreversible or long-term adverse effects also involves maintaining large enough numbers in the wildlife population to maintain a genetically-viable population, which many times can be assured by sustaining natural population levels (USFWS 2001:601 FW 3) (DeLong 2005:28).</p>	<p>21-24. See response 21-14 with respect to legal directives and the DeLong reference.</p>
21-25	<p>The habitat conditions and management actions under which a population exists are integrally related to the health of the population. Reducing the prevalence of brucellosis in elk and bison populations without addressing the unhealthy conditions existing on the refuge would have little or no effect on the ability of the population to withstand and recover from the introduction of a new disease such as chronic wasting disease or bovine tuberculosis or bovine paratuberculosis (Smith 2001, Peterson 2003). It is generally accepted that big game populations maintained at or below carrying capacity of the range with densities that are comparable to populations using native winter ranges, would be at lower risk of mortality from newly acquired diseases and the prevalence of existing disease would decline (Smith 2001, Peterson 2003). Supplemental feeding conflicts with carrying capacity-based big game management. (DeLong 2005:47, see also Smith 2005, Peterson 2005). As expressed by Smith (2001:184), "Biologically, brucellosis is a red flag. It warns us 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</p>	<p>21-25. See response 21-14 with respect to legal directives and the DeLong references.</p>

Comment No.	Letter 21 (cont.)	Response
21-25 (cont.)	<p>significant prevalence. It warns us that the conditions experienced by elk concentrated on feedgrounds are ripe for the transmission of other, more pathogenic diseases," (in DeLong 2005:29).</p>	
21-26	<p>USFWS policy does not allow for densities to reach excessive levels that result in adverse effects on habitat and wildlife, including increased disease risks (601 FW 3.14.E). Even though some adverse impacts to biotic integrity and environmental health may be acceptable as it applies to species and communities other than elk (e.g., migratory birds) elk densities that are sufficiently high to increase the risk of diseases and threaten the long-term health of the elk herd by causing irreversible or long-term adverse impacts to the herd (50 CFR 100.4) would conflict with the NWRSA (16 USC 668dd(a)(2) and 668ee(4)) and USFWS policy (601FW 3.14.E, and 701 FW 1.3, 7 RM 7.2.A). Furthermore, allowances for wildlife densities to compromise biotic integrity, diversity, and environmental health does not allow for densities to reach levels that would compromise the accomplishment of other refuge purposes (e.g., providing breeding habitat for birds, grazing habitat for other big game species). The maintenance of biotic integrity, diversity, and environmental health is somewhat [discretionary], as it is not a requirement to the extent that it would conflict with refuge purposes (16 USC 668(a)(4)(D)), but the accomplishment of refuge purposes is an absolute requirement (16 USC 668(a)(3)(A) and (4)(D)) (DeLong 2002:8).</p>	<p>21-26. See response 21-14 with respect to legal directives and the DeLong reference.</p>
21-27	<p>FWS policy also directs that wildlife populations must be sustained at levels consistent with refuge objectives (701 FW 1.3), and this assumes that refuge objectives addressing population levels are consistent with legal mandates as required by 601 FW 3.4.C(1)(g) (DeLong 2002:8).</p>	<p>21-27. See response 21-14 with respect to legal directives and the DeLong reference.</p>
21-28	<p>According to the Animal and Plant Health Inspection Service Veterinary Services (APHIS-VS) Alternative 4 will "result in the unnatural concentration of animals and provide the potential for disease persistence and spread" (APHIS 2005). Alternative 4, the "Proposed Action" in the DEIS, cannot be lawfully implemented because it cannot meet the missions or purposes of the NPS and FWS. A sustained management plan to provide supplemental feeding of elk and bison on the NER in "above-average winters" (DEIS:46) would inhibit the ability of the NPS and FWS to fulfill their legal directives to manage for healthy wildlife populations as described above. "Alternative 4 can be described as a "band aid" option and one which does not address brucellosis or CWD elimination/prevention in a comprehensive way," (4/18/05 Interagency Review Meeting minutes).</p>	<p>21-28. See response 21-14 with respect to legal directives and the DeLong reference. The agencies disagree that Alternative 4 (Proposed Action) as described the Draft Plan/EIS "cannot be lawfully implemented" given the stated purposes of the National Elk Refuge and Grand Teton National Park (Draft EIS, pp 11–16). While the agencies have a requirement to follow legal mandates, refuge and park managers have latitude in making decisions based on sound professional judgment and other factors. Given the 90+ year history of supplemental feeding in Jackson Hole, the many social and economic factors involved, and opposing stakeholders' views, including those of the cooperating agencies and partners, taking the actions as described under Alternative 4 in the Draft EIS would enable the agencies to take some steps toward addressing the serious habitat and wildlife management issues identified. In the Final Plan/EIS Alternative 4 (the Preferred Alternative) was modified to emphasize the adaptive management of bison and elk, including mitigation of conflicts on adjacent lands. This approach would allow the agencies to have more flexibility to respond to changing conditions. See also response 21-30.</p>
21-29	<p>Maintaining elk feeding operations -- even in approximately half the years -- that would contribute to conditions conducive to levels of CWD in elk higher than on native range in the wintering elk population on the NER violates FWS' NWRSA duty to "sustain ... healthy populations of ... wildlife," 16 U.S.C. sec. 668ee(4), and the duty to "ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans." (Id. sec. 668dd(a)(4)(B). Notably, the FWS' "healthy populations" duty extends not only to the wildlife species themselves, but also to their habitat, (id. sec. 668dd(a)(4)(A)), so that FWS' maintenance of conditions that appear likely to lead to widespread environmental contamination by CWD prions in the</p>	<p>21-29. See response 21-28.</p>

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21-30	<p>refuge environment equally violates the NWRSIA. (See further discussion of this below under Goal 4, Disease Management).</p> <p>Alternative 6 is "the superior management action alternative because it best addresses brucellosis in the elk and bison herds while also addressing the potential for other currently non-endemic diseases of concern in these herds." (APHIS 2005). We agree with APHIS, with some modifications to Alternative 6, and feel that an accelerated timeframe for ceasing feeding enables the agencies to forthrightly address the looming threat of CWD and other diseases.</p>	
21-31	<p>Natural Regulation</p> <p>Natural regulation management and natural process management are major principles of wildlife conservation on national parks which figures prominently into NPS management policies (NPA 2000:4.1, 4.1.5, 4.4.1.1, 4.4.2). For example, the NPS is required to rely upon natural processes whenever possible, to maintain native animal populations and to influence natural fluctuations in these populations (NPS 2000:4.4.2). Similarly, the NPS is required to adopt management practices that "... are intended to maintain the natural population fluctuations and processes that influence the dynamics of individual plant and animal populations, groups of plant and animal populations and migratory animal populations in parks." (NPS 2000:4.4.1.1) (DeLong/Behrens 2005:26). Refuge managers are required to favor management that restores or mimics natural ecosystem processes to achieve refuge purposes (USFWS 2001:601 FW 3.7.D, 620 FW 1.3.D) (Ibid). Therefore, to comply with the natural regulation management directive for the NPS, and the restoration of natural ecosystem processes directive for the USFWS, Alternative 6 with improvements is the best Alternative in the DEIS that offers the agencies the ability to fulfill legal directives. This point is reinforced in the DEIS, Tables 2-5 through 2-8, pp. 81- 82 showing that Alternative 6 ranks highest among the alternatives in meeting agency goals and legal directives, wildlife management principles, and other categories.</p>	<p>21-30. While Alternative 6 would reduce the prevalence of brucellosis in the herds and the risk for adverse effects of other diseases, accelerating the timeframe for phasing out of feeding beyond that proposed in Alternative 6 is not supported by the agencies. In the Final Plan/EIS the agencies have clarified the desired conditions for this planning process. The Preferred Alternative includes a greater emphasis on adaptive management and collaboration with the Wyoming Game and Fish Department and other entities. Existing trends, new research findings, and other changing conditions would provide the basis for developing a dynamic framework for decreasing the need for supplemental food on the refuge. The framework would be developed in cooperation with the Wyoming Game and Fish Department to identify the steps and criteria required for reducing feeding. Population management, vegetation restoration, on-going monitoring, and public education would be integral components of this framework. While these actions are not likely to reduce prevalence or risks in the short term, they would have a better likelihood of success in the long-term.</p> <p>21-31. See response 21-14 with respect to the DeLong/Behrens reference. Also see response 21-30. The agencies believe that the modified Alternative 4 (the Preferred Alternative in the Final Plan/EIS) would enable the agencies to achieve desired conditions and goals and to fulfill the legal directives of the agencies.</p>
21-32	<p>Conservation of Birds</p> <p>USFWS policy directs that wildlife population levels on refuges be maintained at levels consistent with sound wildlife management principles (701 FW 1.3), that populations be managed for natural densities and levels of variation (601 FW 3.14.C), and that population management activities contribute to the widest possible natural diversity of indigenous fish and wildlife, even when population management activities are implemented for single species such as elk (701 FW 1.3) (DeLong 2002:6).</p>	<p>21-32. See response 21-14 with respect to legal directives and the DeLong reference.</p>
21-33	<p>The NER has as one of its conservation priorities sustaining and restoring habitat and sanctuary for native birds including migratory songbirds and waterfowl. (Executive Orders 3596, and 3741). In addition, Executive Order 13186 directs all federal agencies including GTNP to "restore and enhance the habitat of migratory birds, as practicable; . . . (and to) design migratory bird habitat and population conservation principles, measures, and practices, into agency plans and planning processes . . ." For refuges established in whole or in part for migratory birds, as is the case for the NER (E.O. 3596), migratory bird treaties</p>	<p>21-33. See response 21-14 with respect to legal directives and the DeLong reference.</p>

Comment No.	Letter 21 (cont.)	Response
21-33 (cont.)	<p>also provide some direction for habitat management. The treaties with Japan and the [former] Soviet Union obligate the U.S. to protect and enhance the environment of migratory birds and prevent and abate the pollution and detrimental alteration of their environment, including the control of noxious weeds. The most specific obligation on the parts of the U.S. with respect to refuges was outlined in the treaty with the former Soviet Union: ". . . establish preserves, refuges, protected areas, and also facilities intended for the conservation of migratory birds and their environment, and to manage such areas so as to preserve and restore the natural ecosystems." (Article VII of Convention between the USA and the Union of Soviet Socialist Republics Concerning the Conservation of Migratory Birds and Their Environment, 1976). This is clear language, along with USFWS policy (e.g., 601 FW 3.7.B) that native and historic habitat conditions are to be preserved and/or restored, and that concerted efforts must be made to accomplish all refuge purposes and to contribute to the NWRS mission (16 USC 668dd(a)(3)(A) and (a)(4)(D), (DeLong 2002:6).</p>	
21-34	<p>In the Habitat chapter of the DEIS, pages 100-117, the NPS and FWS admit to degraded or declining conditions of aspen, cottonwood, and willow habitat types within their jurisdictions and on the BTNF with the exception of willow communities in GTNP. The degraded or declining conditions of the deciduous woody plant communities such as willow, cottonwood, and aspen are directly related to excessive herbivory by an abundance of elk and now bison in high densities, as well as other factors such as suppression of fire and drought. "The legal mandate of providing bird habitat is addressed [in previous Alternative 7, current Alternative 6] by reducing elk and bison numbers, which would allow willow, cottonwood, and aspen communities to recover in condition and to increase acreage," (Interagency Meeting, 6/15/04). While the DEIS in the chapters on conservation of Neotropical, Gallinaceous, and wetland- and marshland-dependent birds, pages 403 – 425 offers various subtle distinctions as to the anticipated impacts of the six alternatives on these important wildlife species, we recommend that the GTNP and NER adopt Alternative 6 with some slight improvements in order to best accomplish legal directives concerning the conservation of birds. "[Former alternative 7, current alternative 6] would help accomplish the mission of providing the most intact environment for a variety of species, including birds, ungulates, and threatened and endangered species." (Ibid)</p> <p>Meeting Agency Goals:</p>	<p>21-34. See response 21-14 with respect to the former Alternative 7, which was found in earlier versions of the document. Other alternatives considered in the Draft Plan/EIS were described on pages 73–76. Alternatives 4, 5, and 6 in the Draft and Final EISs would use similar fencing strategies to recover willow, cottonwood, and aspen communities and to provide better habitat for birds. Alternative 4 was modified in the Final Plan/EIS to provide the flexibility of using rotating exclosures as the desired conditions were achieved over the life of the plan. Also see responses 21-28, 21-30, and 21-31.</p>
21-35	<p>Based on the purposes and the missions of the NPS-GTNP and the USFWS-NER, four goals were developed for this planning process (DEIS:32). Management plans for refuges and park service units are intended to achieve the goals.</p> <p>Goal 1: Habitat Conservation</p>	<p>21-35. Thank you for your comment.</p>
21-36	<p>Temporary fencing to protect some stands of willow and aspen may be beneficial, and when stands have recovered to a condition or height that is healthy and precludes damaging herbivory, the fences may be moved to another stand (see comments among wildlife and habitat biologists, meeting notes for 2/12/04:4, and DEIS:50). The objectives of Alternative 6, restore 1,300 acres of willow communities on the NER to Class I/II conditions, and maintain approximately 1,800 acres on the NER in Class I/II conditions, and</p>	<p>21-36. See response 21-34 on fencing strategies in the Final Plan/EIS.</p>

Comment No.	Letter 21 (cont.)	Response
21-36 (cont.)	<p>approximately 1,000 acres of cottonwood in Class I/II move the FWS in the direction of compliance with healthy habitat policy (DEIS:81 Table 2-5) more than any other alternative while managing for abundant elk and bison populations, as well. While there are similar acreages slated for restoration in various alternatives, only alternative 6 has the highest numbers of acres for each of these deciduous woody vegetation types.</p>	
21-37	<p>Funding a biotech position on the NER to assist in establishing experimental vegetation plots to determine optimum species composition of acres to be restored is important in order to compile the experimentally derived information to assist the NER to fulfill its legal mandates for healthy habitat. This biotech should assist other refuge personnel in determining how best to accomplish the goals for woody vegetation restoration, as well as restoration of native plants on shrub or grass/forb dominated habitat types.</p>	<p>21-37. Thank you for your comment.</p>
21-38	<p>USFWS Policy requires that the least intrusive and most natural habitat management technique possible be used to achieve habitat objectives and which achieve refuge purposes (USFWS 2002:620 FW 1.7.E). The least intrusive method to apply water to vegetation is natural precipitation and runoff from melting snows and other high-water producing events. "To maintain or restore a native diversity of wildlife, . . . natural habitat conditions must be approximated which may involve managing habitat to mimic natural systems or allowing natural processes to shape and sustain habitat, or a combination of both (USFWS 2001:601 FW 3, USFWS 2002:620 FW 1.7.E.), (DeLong/Behrens 2005). We recommend that farming should be minimized on the NER, and that native plant species should be prioritized over non-natives.</p>	<p>21-38. See response 21-14 with respect to legal directives and the DeLong/Behrens reference. Alternative 4 in the Final Plan/EIS was modified to state that farming would be used as necessary to achieve forage production objectives. The acreage for cultivated fields (2,400 acres) is small compared to the overall size of the National Elk Refuge (24,565 acres) (Draft Plan/EIS, p. 100). While the agencies agree with the commenter about the importance of native plant species, in order to achieve the desired conditions and goals of this plan, forage production on cultivated fields is an important management tool needed to achieve a reduction in the use of pelletized food.</p>
21-39	<p>Forage production on cultivated fields may result in higher densities of elk and bison than what would occur on native winter range where forage production per acre is less and is more uniformly distributed over the landscape. This means that disease risk associated with elk using cultivated fields is likely higher than what occurs on native range although likely lower than what occurs on feedlines, (DeLong/Behrens:32). Key to enabling the agencies to achieve their goals and fulfill their legal directives, are the lands to the east of the NER on the USFS-BTNF in the Cache Creek/Curtis Canyon big game winter range complex. Since 2000 an average of 1,249 elk have utilized the winter range east of the NER (WGFD 2005). There <i>may</i> be opportunities to winter more elk on this range, but even at existing levels it is a significant contribution to the overall Jackson Elk Herd population. In the Gros Ventre Valley, the same can be said to an even greater extent. We feel that the winter range is underutilized in the Gros Ventre Valley and that the approximately 2,900 elk that are fed each winter on the 3 Gros Ventre feedgrounds by the WGFD can winter naturally on the USFS-managed winter range along with the approximately 1,500 elk that already do (<i>Forage estimate</i> by GYC 2005). The entire Jackson elk and bison herds can be distributed during winter over a much larger area on these USFS lands combined with GTNP and the NER and the mixed ownership lands in the Buffalo Valley which function as winter range resulting in more natural wintertime densities and facilitating healthier conditions and healthier populations. Alternative 6 is the only alternative in the DEIS which crafts a management plan that allows this more natural and healthier distribution of elk and bison while still contributing to bountiful elk and bison herds in the Jackson Hole area.</p>	<p>21-39. See response 21-14 with respect to the DeLong/Behrens reference. See response 21-38 on forage production. As stated in the Draft Plan/EIS, the agencies are committed to working in forums like the Jackson Interagency Habitat Initiative (Draft EIS, p. 38) to improve habitat for bison and elk. The agencies believe Alternative 4 as modified in the Final Plan/EIS would provide for better cooperation by others and more flexibility in managing bison and elk populations than would Alternative 6 in achieving healthy and sustainable populations over the long term.</p>

Comment No.	Letter 21 (cont.)	Response
21-40	<p>Alternative 6 provides management flexibility to achieve the targeted range of elk and bison populations wintering on the NER. It may be that native vegetation rather than irrigated fields and non-native plants, will suffice (DeLong 2005:31). The amount of forage provided for ungulates on the NER may be affected by snowpack, and the forage during later harsh months of the winter may be affected by early season grazing by elk and/or bison. Therefore, opening the southern portion of the NER to hunting in the late fall and possibly early winter in order to haze elk and possibly bison away from that area that is typically the last area on the NER to become affected by snowpack may provide a better utilization of produced forage than in past years, and thus may afford the agencies to better fulfill their legal directives and manage for healthy wildlife and habitat. (see GYC comments on hunting below).</p>	<p>21-40. See response 21-14 with respect to the DeLong reference. Under Alternatives 3, 4, and 6 the primary purpose for opening the southern portion of the refuge for an early season hunt or other public use would be to move elk into other areas and increase harvest efficiency, but the agencies agree with the commenter that this could provide better utilization of some forage.</p>
21-41	<p>Restoring approximately all the 2,400 acres in GTNP that were previously cultivated (DEIS:50 and others) and have not converted to native vegetation enables the NPS to achieve some Habitat Conservation Goals and to fulfill some of the legal requirements for healthy habitat (DEIS:52), and are a favorable component Alternative 6. Since Alternative 6 also combines this component with others that meet both the NPS and the FWS legal directives, Alternative 6 with improvements is recommended.</p> <p><u>Goal 2: Sustainable Populations</u></p> <p>Health of Elk and Bison</p>	<p>21-41. Thank you for your comment.</p>
21-42	<p>Sustainability for elk and bison on the NER is defined to include resiliency and minimized risks of long-term adverse impacts. For GTNP it emphasizes characteristics indicative of natural populations including fluctuations in populations (DEIS:60). The staff report, <i>Basis of Goals and Objectives</i> of January 31, 2005 by DeLong, offers a lengthier treatment of this important facet of wildlife management than does the DEIS and decisionmakers must consider this document and its reasoning. This report states that population health is central to the mission of the Refuge System and goes on to cite previous reports that define health in terms such as "equivalent to that of resiliency", "stability", "ability to recover from normal stresses and requiring <i>minimal</i> outside care," (page 27). Further, the report cites Peterson, 2003, "If direct human intervention is being used to maintain a low level of a particular disease in a wildlife population, this means that the conditions under which the population persists are unhealthy and, ultimately, that health of the wildlife population is diminished. If a wildlife population is maintained under unhealthy conditions (excessive densities for a portion of the year) its ability to rebound after the introduction of a new disease (e.g., chronic wasting disease) can be diminished if the unhealthy conditions are not remedied." We also recommend and append the 2003 Peterson report, <i>Appendix F Infectious Agents of Concern for the Jackson Hole Elk and Bison Herds: An Ecological Perspective</i> and we encourage the decisionmakers to avail themselves of this work.</p>	<p>21-42. See response 21-14 with respect to the DeLong references and response 21-23 regarding the Peterson report (2003).</p> <p>21-43. See response 21-14. Impairment of park resources was evaluated for each alternative and impact topic in the Draft and Final EISs. Barring the introduction of a non-endemic disease, Alternative 4 (Draft Plan/EIS, pp. 291, 332) would not result in impairment to elk or bison. If a non-endemic infectious disease became established in the herd, Alternative 4 would have lower potential for impairment than would Alternatives 1 and 5, and might be similar to Alternatives 2, 3, and 6 in the short term. Under Alternative 6 the high densities associated with feedgrounds would decrease, and the herd would disperse more, so brucellosis seroprevalence would be expected to decrease over time. However, modeling has shown that bison populations as small as 200 animals can maintain brucellosis (Draft EIS, p. 338), and reducing prevalence in bison will likely require a multi-faceted approach.</p>
21-43	<p>For GTNP, a mandate is to ensure that natural resources remain in an "unimpaired condition for future generations" (16 USC 1, 16 USC 1a-1, NPS 2000:1.4.4); management actions such as wintertime artificial feeding on the NER adversely affects the ability of</p>	

Comment No.	Letter 21 (cont.)	Response
21-43 (cont.)	<p>GTNP to accomplish this mandate by perpetuating conditions (i.e., excessive elk and bison densities and feedlines) that lead to diseased elk and bison. If at some time the NER meets its legal directives under its mission, purpose, and policies, management actions on the NER still cannot legally compromise the ability of the NPS to safeguard the resources within its jurisdiction against impairment. Alternative 4, which allows for wintertime feeding of elk and bison on the NER in approximately 4-5 of 10 years, does not safeguard elk and bison that roam on GTNP from brucellosis, nor from other diseases that may yet occur in Jackson Hole such as CWD, bovine TB, and bovine paratuberculosis. Alternative 6, which manages for decreased densities and ceases winter feeding of elk and bison, does safeguard NPS elk and bison. Therefore the agencies should adopt Alternative 6, with some improvements that we recommend.</p>	<p>21-43 (cont.). Alternative 4 as modified in the Final Plan/EIS includes implementation of a dynamic framework, which would be developed cooperatively with the Wyoming Game and Fish Department and others. This framework would include specific criteria for progressively reducing supplemental feeding and decreasing densities. While the bison and elk herds migrate between summer and winter ranges, the agencies do not distinguish them as NPS or USFWS elk and bison. The herds migrate across several jurisdictional boundaries, including Grand Teton National Park and the National Elk Refuge, and the agencies work cooperatively with the Wyoming Game and Fish Department (which has responsibility for managing resident wildlife) and others to manage the populations.</p>
21-44	<p>Supporting efforts to establish and protect elk migrations to traditional winter ranges is key to both the NPS' and FWS' missions and policies that mandate the protection of sustainable healthy populations of wildlife and habitat. While enhancing elk migrations from the Snake River basin (including the Gros Ventre and Buffalo Fork valleys) to the Wind River or Green River basins may be problematic in the short term (although Smith and WGFD have documented existing interchange by elk among those drainages), the NPS and FWS should work with the WGFD and the BTNF to protect and enhance winter ranges in the Snake River basin area of Jackson Hole, including the Buffalo Fork and Gros Ventre river basins, and help phase out the elk feedgrounds in the Gros Ventre Valley. Protection of winter ranges and ending the feedgrounds would help the NPS and FWS fulfill their legal directives concerning healthy wildlife populations, and help the WGFD to achieve sustainable free-ranging elk populations, and help the USFS-BTNF manage for healthy habitat.</p>	<p>21-44. Support for efforts to establish elk migrations to traditional winter ranges was analyzed under Alternatives 2 and 3 in the Draft Plan/EIS. This option was not selected for the preferred alternative in the Final Plan/EIS. The Wyoming Game and Fish Department (as well as other landowners) is opposed to these efforts, and the agencies do not have the authority or jurisdiction to force this issue. Under Alternative 6 it would be less likely that there would be large migrations out of the primary analysis area because of improved forage conditions, herd reductions, and efforts to minimize conflicts on adjacent lands. The agencies already participate in work groups such as the Jackson Interagency Habitat Initiative (Draft EIS, p. 38), which strives to identify opportunities for improving habitat for bison and elk. Phasing out state feedgrounds is not an option being considered in this planning process.</p>
21-45	<p>The Jackson Interagency Habitat Initiative is one collaborative process among those agencies that enhances habitat, but both the NPS and FWS need to be more active in assisting the WGFD and BTNF in phasing out elk feedgrounds beginning in the Gros Ventre Valley. Another way is for the NPS and the FWS to publicly endorse the <i>Brucellosis Solution Gros Ventre Pilot Project</i> by GYC, JHCA, and WOC (GYC website). The manager of the NER and the Superintendent of GTNP should write a letter to the director of the WGFD, the Governor of Wyoming, the Teton County Wyoming Commissioners, to all members of the GYIBC, and the Supervisor of the BTNF explicitly endorsing ceasing feeding at the 3 feedgrounds in the Gros Ventre Valley at the earliest opportunity, and should offer agency resources if needed to achieve the feedground closures.</p>	<p>21-45. Thank you for your comment.</p>
21-46	<p>When the elk feedgrounds are phased out in the Gros Ventre, and when feeding ceases on the NER, the winter range in the Gros Ventre Valley will maintain 50 – 60% of the entire Jackson Elk Herd numbers and, possibly, some of the Jackson Bison Herd as well.</p>	<p>21-46. Thank you for your comment.</p>
21-47	<p>Goal 3: Numbers of Elk and Bison:</p> <p>Elk and bison are to be managed and conserved on the NER to the extent that densities do not cause habitat and disease problems (USFWS 2001: 601 FW 3.14.E)</p>	<p>21-47. See response 21-14 with respect to legal directives and the DeLong reference.</p>

Comment No.	Letter 21 (cont.)	Response
21-47 (cont.)	<p>(DeLong 2005:59). GTNP is required to sustain bison numbers that would occur in the absence of human dominance over the landscape (NPS 2000:4.0, 4.1, 4.4.1, 4.4.1.1) (Ibid). While contributing to the herd objectives of the WGFD <i>can</i> be part of the management of both the NER and GTNP, achieving the missions, purposes, goals, and policies of the NPS and/or the USFWS take precedence over contributing to the herd objectives if there is a conflict between the WGFD elk or bison herd objective and legal directives of the NPS and FWS.</p>	
21-48	<p>Deciduous woody vegetation communities are important to the conservation of elk and other wildlife species in Jackson Hole. The NER has sustained damage to deciduous woody vegetation types attributed to excessive numbers of elk and bison that are maintained by the winter feeding on the NER. GTNP has found it necessary to attempt an experimental temporary fencing project to promote aspen regeneration (at Wolff Ridge) and experiences diminished cottonwood regeneration along the Snake River riparian corridor due to the interruption of natural high water events by the existence of Jackson Lake dam. Along with the historic extirpation of large predators and disruption of big game migrations, the "institution of feeding. . . has disrupted the plant-herbivore balance on the National Elk Refuge." (See <i>Imperfect Pasture: A Century of Change at the National Elk Refuge in Jackson Hole, Wyoming</i> by B. Smith, E. Cole, and D. Dobkin, 2004 for an excellent treatment of this issue of effects on plant communities and wildlife species from ungulate herbivory and other causes; page 109 and others; see also DEIS:104-105, 111).</p>	21-48. Thank you for your comment.
21-49	<p>Alternative 4 in the DEIS perpetuates the winter feeding on the NER (DEIS: 46) in 4-5 of 10 years. Alternative 6 phases out the winter feeding program, although we recommend that phase out occur within 2-3 years if possible. The numbers of elk and bison in Alternative 6 allow both GTNP and the NER to fulfill their legal directives while still contributing elk and bison to overall Jackson herd population size. See our comments below at Bison Conservation on how allowing only 400 bison to winter on the NER can still contribute to a more ecologically appropriate Jackson bison herd population throughout the region.</p>	21-49. See response 21-30 regarding the Preferred Alternative in the Final Plan/EIS. The agencies disagree that feeding should be phased out within two to three years under Alternative 6. Improving forage, reducing the herd size, minimizing conflicts on adjacent lands, and transitioning the herd away from supplemental feeding would take five years. Budget constraints also factor into the transition period. The bison population objective in Alternative 6 was modified to be consistent with Alternative 4 (approximately 500 bison) in the Final EIS. It should be noted that the Wyoming Game and Fish Department sets goals and objectives for the herd through a public review process that requires public input and a final departmental recommendation to be approved by the Wyoming Game and Fish Commission.
21-50	<p>For elk, Alternative 6, while allowing the NER and GTNP to fulfill their legal directives, allows short- and long-term numbers ranging from 2,400- 3,200. We propose the following calculations: with 2,800 as the mid range in this elk subherd wintering on the NER, add the 1,200 that winter on the Curtis Canyon-Cache Creek complex on BTNF east of the NER (WGFD comments to DEIS, 2005); add as many as 1,000 elk in Buffalo Valley (WGFD JCR's 2000), add another 500 wintering in GTNP (in the Snake River corridor, and on the Kelly Hills) and Walton, East and West Gros Ventre Butte, and add 5,000 elk wintering on native range in the Gros Ventre (GYC 2005) when feedgrounds are phased out, and the total is 10,500 elk that could winter in the Jackson Elk Herd Unit area without artificial feeding. And we believe that figure is conservative for many reasons, and serves to protect and sustain the hunting and outfitting industry in Jackson Hole, and enables the agencies to fulfill their legal directives. The Gros Ventre numbers are conservative since the forage estimate builds in many conservative information sets, the NER figure is mid range per the DEIS Alternative 6, the Buffalo Valley number is conservative since it is 12% below the</p>	21-50. Thank you for your comment.

Comment No.	Letter 21 (cont.)	Response
21-50 (cont.)	<p>maximum number of elk that have wintered there in recent years and, we believe, 500 is conservative for elk wintering in GTNP and the buttes.</p>	
21-51	<p>Although Alternative 4 attempts to diminish the winter feeding to 4-5 of 10 years, it would likely not be sufficient to substantially reduce disease transmission rates during a majority of years (T. Roffe in DeLong 2005:52). Nor would Alternative 4 entirely allow the USFWS to fulfill its legal directives for conservation of habitat. Therefore, with the ability of the NPS and the FWS to contribute very adequately to as many as 650 Jackson Hole bison, and at least 10,500 elk, Alternative 6 with improvements noted in these comments should be the chosen management plan arising from this analysis.</p> <p style="text-align: center;">Contraception and Fertility Control</p>	<p>21-51. See response 21-14 with respect to legal directives and the DeLong reference and responses 21-30 and 21-34 regarding the Preferred Alternative in the Final Plan/EIS.</p>
21-52	<p>We recommend that federal and state management agencies do not undertake a fertility control, sterilization, spaying, neutering, or contraception program for either wild elk or wild bison anywhere in Wyoming.</p> <p style="text-align: center;">Test and Cull</p>	<p>21-52. Thank you for your comment. Fertility control is not an action identified for the Preferred Alternative in the Final Plan/EIS.</p>
21-53	<p>We recommend that federal and state management agencies do not undertake a test and cull program for wild bison or wild elk anywhere in Wyoming.</p> <p style="text-align: center;"><u>Goal 4: Disease management (see also attached reports by Smith, 2001, 2005, and Peterson 2003, 2005)</u></p> <p style="text-align: center;">Brucellosis</p>	<p>21-53. A test and cull program was not an option considered in any of the alternatives.</p>
21-54	<p>Winter feeding is responsible for a high prevalence of brucellosis in elk and prevalence in bison (DEIS:34). As noted by (Olaus Murie (1951:306), "Concentrations of animals year after year in the same place is generally assumed to be conducive to greater hazard from disease and parasites." (DeLong/Behrens 2005:42). It is clear that the management of the NER and of the BTNF has a cross over effect on GTNP wildlife when diseases are a concern. The NER's winter feeding program has a direct and large influence on elk and bison in GTNP. The winter feeding program also is a major contributing factor to a higher-than natural prevalence of disease (Thorne 2001, Thorne et al 2002, Peterson 2003 in DeLong 2005:39). The same can be said that the operation of elk feedgrounds on USFS and State of Wyoming lands in the Gros Ventre Valley contribute to high seroprevalence for exposure to brucellosis in elk, some of which use GTNP and NER lands, and the operation of those Gros Ventre feedgrounds contributes to elevated levels of risk of other diseases in Jackson Hole elk such as CWD, bovine tuberculosis, and John's disease.</p>	<p>21-54. See response 21-14 with respect to the DeLong/Behrens reference and response 21-23 regarding the Peterson report.</p>
21-55	<p>Allowing big game to distribute themselves in natural densities over the landscape and reducing crowding reduces the risk of disease transmission (Smith 2001, 2005, Peterson 2003, 2005 and others). Therefore, habitat conservation and management is central to any approach to disease management that attempts to reduce densities without markedly reducing numbers of animals in a given region (DeLong/Behrens 2005:32). Densities of elk</p>	<p>21-55. See response 21-14 with respect to the DeLong/Behrens reference and response 21-23 regarding the Peterson report.</p>

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21-55 (cont.)	<p>on the NER during the winter feeding season rise as high as 2,500 or more per square kilometer; whereas elk densities on the BTNF outside the feedgrounds on native range vary from 20-100 elk per square kilometer (Peterson 2003:9). "(T)he (USFWS) agency cannot allow [wildlife] densities to reach excessive levels that result in disease problems and other adverse impacts to wildlife (USFWS 2001:601 FW 3.14.E) (DeLong 2005). "Clearly, free-roaming elk are unable to maintain brucellosis in the absence of feedgrounds" (Peterson 2003:25). "Elk do not seem to be capable of sufficient intraspecific transmission of brucellosis to maintain the disease in the population when not concentrated on feeding grounds" (Thorne and Herriges 1992 in Cheville et al 1998:38).</p>	
21-56	<p>"Brucellosis is difficult to maintain in a free-ranging population of elk . . ." (B. Smith 2001: 184). It is also noted by many authors that if elk are not sharing ranges with infected bison or infected elk, seroprevalence is essentially zero or at low, single-digit levels (Cheville 1998, Smith 2001, Peterson 2003). Since Alternative 4 and others in the DEIS perpetuate the winter feeding of elk and bison in at least 4-5 of every 10 years, and up to 9 of 10 years, this will not allow elk and bison to consistently distribute across the landscape in natural densities and will undoubtedly perpetuate the conditions that exacerbate disease prevalence. Alternative 6, while contributing to abundant elk and bison populations, phases out the winter feeding of elk and bison on the NER and significantly contributes to diminishing rates of seroprevalence for exposure to brucellosis in elk and will likely contribute to lower seroprevalence in bison as well.</p> <p>Chronic Wasting Disease</p>	<p>21-56. See response 21-23 regarding the Peterson report. See response 21-30 and 21-31 regarding changes to Alternative 4 (the Preferred Alternative in the Final Plan/EIS) and response 21-43 regarding seroprevalence in bison under Alternative 6. To clarify the comment regarding alternatives and feeding, Alternative 5 would allow for feeding approximately 9 out of every 10 years.</p>
21-57	<p>CWD among all cervids native to Wyoming is the same disease, and CWD exists among sympatric herds of elk and mule deer in southeast Wyoming and northern Colorado (WGFD website). CWD is infecting mule deer and white-tailed deer in the Bighorn basin east of Jackson hole (WGFD news releases 10/28/05 and 11/4/05; Casper Star-Tribune 11/3/05), less than 100 miles from the Jackson elk herd unit boundary. CWD typically exists in a higher percentage of a given population of deer or elk dependent on the densities of the population; a higher density similar to the densities of game farms results in a higher percentage of the population affected with CWD. CWD is always fatal to infected cervids (Peterson 2003). CWD was recently found in a wild moose in Colorado (WYNPR 2005). Interspecies transmission of CWD among mule deer, white-tailed deer, and elk have been documented (Peterson 2005). Wildlife disease experts agree, if CWD somehow becomes established in feedground elk, we can expect an epidemic (Ibid 2003). The National Elk Refuge anticipates that the arrival of CWD would bring forth "potentially catastrophic impacts," (Interagency Review Meeting 4/18/05 minutes).</p>	<p>21-57. The Final Plan/EIS was updated with current information on chronic wasting disease (2005).</p>
21-58	<p>The introduction of a non-endemic disease, such as chronic wasting disease, would negate the advantages of supplemental feeding and could result in substantial declines in the elk population (DEIS:508). "High elk densities associated with the National Elk Refuge . . . approximates those in captive elk herds where CWD prevalence was 20 to >90%. Elk density in Jackson Hole (feedgrounds) is far higher than that in free-roaming elk populations in the Colorado-Wyoming [CWD] endemic area. Thus if CWD somehow becomes</p>	<p>21-58. Thank you for your comment.</p>

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21-58 (cont.)	<p>established in the Jackson elk herd, one should expect an epidemic; these are probably nearly ideal conditions for a CWD epidemic. . . ." (Peterson 2003:52).</p>	
21-59	<p>Chronic wasting disease is of particular concern because the prions are extremely resistant to being destroyed and it appears that the prions can persist in the environment for long periods and that ungulates can be infected by prions in the environment even years after contamination (Miller, et al 2004). Environmental contamination plays a big role in CWD prevalence and preventing animal concentrations and decreasing the potential for ground contamination would be essential for management (T. Roffe at 2/4/04 Interagency Meeting). So if an ungulate population such as the fed elk on the NER, or any of the GYE elk feedgrounds, are fed hay or alfalfa pellets and thus concentrated in high densities on the same piece of ground for many weeks or months, winter after winter, and if CWD existed in some of the elk (or other cervids using those feedgrounds), this could increase the potential for spread of CWD in the population. As noted above, Peterson, 2003, calls the conditions on elk feedgrounds "nearly ideal" for an epidemic of CWD, and decisionmakers in the NPS and FWS should avail themselves of Peterson's 2003 and 2005 reports attached to these comments.</p>	<p>21-59. Thank you for your comment. See response 21-23 in reference to the Peterson report.</p>
21-60	<p>The NPS and USFWS is aware of the above and must, in accordance with legal directives, develop and implement a management plan which best minimizes the risk of significant deleterious effects from diseases resulting from management actions within its jurisdictions. The proposed Alternative 4 does not accomplish this since it does not phase out artificial winter feeding to the extent that it adequately minimizes deleterious effects of extant and potential diseases, nor does alternative 4 adequately reduce densities of elk to, or just short of, a healthy carrying capacity of the range; "(R)educing the frequency of winter feeding from about 9 of 10 years to 4-5 years of 10 years would likely not be sufficient to substantially reduce transmission rates during a majority of years." (Roffe 2004, personal communication in DeLong 2005:52). Prevalence of CWD in elk <i>would be higher</i> under Alternative 4 than Alternative 6 due to winter feeding under Alternative 4 (DEIS:288). Under Alternative 4, prevalence of CWD in elk on the NER would be "closer to 90%" compared to Alternative 6, "closer to 5%" (DEIS:84 Table 2-9). Alternative 6 does accomplish an appropriate minimizing of the risk of significant effects from disease on wildlife primarily because it phases out artificial winter feeding on the NER and because it significantly reduces densities of big game from current densities and to the carrying capacity threshold intended to foster healthy wildlife and healthy habitat. The agencies must implement Alternative 6, and we recommend some improvements to 6 in these comments.</p> <p>Bovine tuberculosis</p>	<p>21-60. See response 21-14 with respect to the DeLong reference. See responses 21-28 and 21-30 with respect to Alternative 4 as modified in the Final Plan/EIS. In the short term the Preferred Alternative would not be expected to reduce the risk for density-dependent diseases, but in the long term the risk could be substantially lower (if environmental contamination did not occur).</p>
21-61	<p>Bovine tuberculosis (bovine TB) is a "subacute to typically chronic disease in bison and cervids that can spread directly via aerosols . . . Thus transmission of (the causative bacteria <i>Mycobacterium bovis</i>) is directly dependent on the density of susceptible hosts," (Peterson 2003: 40). Bovine TB can also infect humans (DEIS:170).</p>	<p>21-61. See response 21-23 in reference to the Peterson report.</p>
21-62	<p>While bovine TB is not known to exist in elk or bison in GTNP or the NER, it has been known to exist in captive and free-ranging cervids, cattle, and bison in other states and</p>	<p>21-62. See response 21-23 in reference to the Peterson report.</p>

Comment No.	Letter 21 (cont.)	Response
21-62 (cont.)	<p>provinces (Peterson 2003). "If one desired ideal circumstances for maintaining <i>M. bovis</i> in a free-roaming elk population, they would have to go no further than the National Elk Refuge and other GYA (elk) feedgrounds . . . If <i>M. bovis</i> somehow became established in the Jackson elk and bison herds, intense effort on the part of managers would be required to eliminate this chronic disease. . . Almost certainly, winter feeding of elk and bison would have to be discontinued" and elk and bison densities would have to be significantly reduced." (Ibid).</p>	
21-63	<p>Since bovine TB is density dependent it is incumbent on the NPS and FWS to develop and implement a management plan which best minimizes the risk of significant deleterious effects from this and other density dependent diseases. Alternative 4 does not accomplish this, but Alternative 6 does. Implementation of Alternative 6 would result in lower potential prevalence of disease such as bovine TB and paratuberculosis in elk and bison on the NER "by a major amount" (DEIS:84 Table 2-9). See the final paragraph above under CWD for further comments that apply here as well.</p> <p>Bovine paratuberculosis (Johne's disease)</p> <p>Bovine paratuberculosis is a chronic disease of bovids and cervids worldwide (Peterson 2003). Transmission is directly related to host density and environmental contamination is important (Ibid). Paratuberculosis has been documented in ranched bison in the northern GYA. . . should paratuberculosis become established in Jackson Hole bison or elk . . . reducing host density would be the best available method for controlling the disease (Ibid). Our comments above at the end of CWD apply here as well.</p>	<p>21-63. See responses 21-28, 21-30, and 21-60 in reference to changes made to Alternative 4 in the Final Plan/EIS. The agencies agree that Alternative 6 would minimize the risk of significant deleterious effects of bovine tuberculosis or other density-dependent diseases, including chronic wasting disease, by phasing out feeding within five years. However, the agencies believe that the modifications made to Alternative 4 would enable the agencies to have more flexibility to respond to changing conditions by implementing a dynamic framework for decreasing the need for supplemental feeding on the refuge based on adaptive management principles while working collaboratively with the Wyoming Game and Fish Department and others to achieve the desired conditions and goals of this plan.</p>
21-64	<p>Other diseases and parasites of elk and bison</p> <p>There are other diseases and parasites that are affecting bison and elk in GTNP and the NER and some that are not known to exist yet, but could deleteriously affect bison and elk directly if they were introduced through some means (see Peterson 2003 <i>Appendix F Infectious Agents of Concern</i> . . . in entirety).</p>	<p>21-64. See response 21-23 in reference to the Peterson report and responses 21-60 and 21-63 for changes to Alternative 4 in the Final Plan/EIS with respect to disease prevalence.</p>
21-65	<p>The closer that elk (and to some extent bison) approximate the density characteristics of a fenced population, the higher the risk will be of a major disease outbreak. Conversely, the more that conditions approximate natural, free-ranging conditions, the lower the severity of adverse impacts stemming from the introduction of a non-endemic infectious disease (DeLong 2005:45). Peterson in the <i>Appendix F Infectious Agents of Concern for the Jackson Hole Elk and Bison Herds: An Ecological Perspective</i>, 2003, discusses several of these. GYC recommends that the NPS and FWS consider Peterson's 2003 report, and recognize that his recommendations focus on decreasing densities of elk and bison, ceasing the winter feeding program, and undertaking management actions which focus on restoring healthy habitat and wildlife that are in balance with the carrying capacity of the habitat.</p>	<p>21-65. See response 21-23 in reference to the Peterson report.</p>
21-66	<p>The proposed Alternative 4 in the DEIS does not adequately achieve the decreased densities needed to accomplish the above. See our final paragraph above under CWD for</p>	<p>21-66. See response 21-23 in reference to the Peterson report. See response 21-14 with respect to the DeLong reference and responses 21-30, 21-60, and 21-63 regarding changes made to Alternative 4 in the Final Plan/EIS.</p>
21-67	<p>The proposed Alternative 4 in the DEIS does not adequately achieve the decreased densities needed to accomplish the above. See our final paragraph above under CWD for</p>	<p>21-67. See response 21-23 in reference to the Peterson report. See responses 21-60 and 21-63 regarding changes made to Alternative 4 in the Final Plan/EIS and risks for diseases.</p>

Comment No.	Letter 21 (cont.)	Response
21-67 (cont.)	<p>our reasoned recommendation pertinent to the need for the NPS and FWS to choose Alternative 6 with some improvements to address Goal 4 Disease Management.</p>	
21-68	<p>We also offer two additional reports that are appended to our comments which point out some of the impacts to wildlife in GTNP and the NER that result from current management that involves winter feeding of elk and bison on the NER. The 2005 reports, one by Bruce Smith, Ph.D., and the other by Markus Peterson, Ph.D., also compare the effects of the proposed Alternative 4 in the DEIS and Alternative 6, clearly showing and recommending that the agencies should select Alternative 6. These reports are to be considered by the agencies as part of GYC's comments and recommendations.</p>	<p>21-68. The agencies acknowledge receipt of the referenced reports. These reports do not contradict the impacts of the alternatives as described in the Draft Plan/EIS. See response 21-23 in reference to the Peterson report.</p>
	<p>Cease vaccinating elk, and do not vaccinate bison until an effective non-intrusive vaccine is developed</p>	
21-69	<p>"Although RB51 has been determined to be safe [for bison], there is debate and conflicting scientific evidence regarding the efficacy of RB51." (from A Status Review of Adaptive Management Elements, 2000-2005. September 2005 APHIS, MFWP, MDOL, Gallatin NF, YNP. p. 34).</p>	<p>21-69. Thank you for your comment.</p>
21-70	<p>"(A) safe vaccine having low efficacy is of little value." (Peterson 2003: 31) "Because S19 was unsafe for pregnant bison, provided no protection during calthood vaccination, and was no more efficacious than field strain at preventing subsequent abortions, researchers began looking for a more useful vaccine for bison." (Ibid: 32).</p>	<p>21-70. Thank you for your comment. See response 21-23 in reference to the Peterson report.</p>
21-71	<p>"(S)tandard doses of commercial SRB51 (1) are unsafe for pregnant bison, (2) protect somewhere between 0 and 44% of vaccinated bison from abortion, and (3) offer little protection against infection with challenge strains of <i>B. abortus</i>." (Ibid)</p>	<p>21-71. Thank you for your comment.</p>
21-72	<p>"(S)tudies suggest that SRB51 is not efficacious in elk." (Ibid:34) Peterson, 2003, at page 33 also goes to length to explain the deficiencies in the WGFD's program to vaccinate elk on feedgrounds with Strain 19. He also notes that in studies conducted after the deficiencies in the WGFD's program "came to light", a study by Roffe, et al, in 2003 showed a 26% protection against abortion using S19 was experienced by one experimental group of elk. Further, "Under these experimental conditions, S19 was only marginally efficacious against abortion." (Ibid)</p>	<p>21-72. The agencies agree that Strain 19 and RB51 have not been shown to have a high efficacy in preventing abortions. They are safe to use and do not negatively impact wildlife. The Preferred Alternative was modified in the Final Plan/EIS to allow for the use of Stain 19 and other vaccines until logistics prevent such use or more effective vaccines are found.</p>
21-73	<p>In light of the dismal results of currently available vaccines for bison and elk, we recommend that all agencies, state and federal, cease vaccinating bison and elk for protection against brucellosis, and that any future proposed vaccination program undergo rigorous analysis with extensive public involvement. Strain 19 vaccinations for elk on the NER should cease.</p>	<p>21-73. The agencies believe that the proposed vaccination program outlined in the alternatives in the Draft Plan/EIS has been analyzed with extensive public involvement. A draft compatibility determination was included in the Draft EIS (Appendix G). As part of the Preferred Alternative to implement the Bison and Elk Management Plan, a structured framework would be developed in collaboration with the Wyoming Game and Fish Department and would address state wildlife management activities, including vaccination, on the National Elk Refuge. The Preferred Alternative in the Final Plan/EIS was modified to allow for the use of Strain 19 and RB51 until logistics prevented such use or more effective vaccines are found.</p>
21-74	<p><u>Bison Conservation in Jackson Hole</u></p> <p>"Bison is a big game species native to Jackson Hole (NPS et al. 1996) and therefore the USFWS is required to provide grazing habitat for this species (44 Stat. 1246). Providing</p>	<p>21-74. See response 21-14 with respect to the DeLong/Behrens reference.</p>

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21-74 (cont.)	<p>habitat on the NER for bison or any native big game species contributes to the conservation of natural biological diversity of the Jackson Hole area. The genetic viability of the Jackson bison herd is strongly influenced by two factors: population size and rates of immigration (the addition of animals from other populations), (DeLong/Behrens 2005:38).</p>	
21-75	<p>The NER and GTNP must sustain or contribute to sustaining healthy populations of bison, bighorn sheep, mule deer, moose, and pronghorn over the long term. Consistent with refuge purposes, the NER must manage for a natural diversity of big game species (701 FW 1.3), which includes a natural level of abundance and natural population fluctuations of each species (701 FW 1.4.A, 601 FW 3.14.C). The natural population level of wintering bison can be viewed at scales larger than the NER, including landscape and ecosystem levels (601 FW 3.7.C). The NER is required to contribute to sustaining healthy populations of other wildlife species, including birds, other big game species, and other native wildlife species. (DeLong 2002:9).</p>	21-75. See response 21-14 with respect to legal directives and the DeLong reference.
21-76	<p>The NPS is required to sustain bison numbers at natural population levels and fluctuations; i.e., at levels and fluctuations that would occur in the absence of human dominance over the landscape (NPS 2000:4.0, 4.1, 4.4.1, 4.4.1.1). Although numeric objectives are not typically formulated for wildlife on national parks, a population objective for bison is needed for GTNP to ensure that winter feeding does not result in unnaturally high numbers of bison on the park and also to ensure that agency actions such as a public bison hunt on the NER does not result in unnaturally low numbers of bison or in a genetically unviable herd.</p>	21-76. See responses 21-12 and 21-49 regarding recommendations for the bison population objective in the Final Plan/EIS.
21-77	<p>The federal agencies may not maintain bison numbers at or just above a level defined by a minimum genetic threshold unless, as stated above, those agencies are contributing only a portion of a population that exists in a "landscape and ecosystem level". "... 400 was the minimum number of bison determined to be genetically viable without having to introduce animals from outside the herd every several years." (Interagency Meeting notes, 6/15/04). No other big game species is intentionally managed down to or even near to a genetically viable minimum in Wyoming. Bison in GTNP and the NER must in accordance with federal law and regulations be managed in a manner that balances the carrying capacity of the range, and in as close to pre-Euro-American settlement numbers and ratios to other big game species in a given area as is possible to determine with the best available information.</p>	21-77. See responses 21-12 and 21-49 regarding the recommended bison population objective. As reflected in the Preferred Alternative in the Final Plan/EIS, the agencies believe that bison management based on monitoring and habitat availability can sustain genetic viability without the introduction of animals from outside the herd. Managing bison at range carrying capacity must account for numbers of other species utilizing that range. Although bison remains have been found in Jackson Hole, it is unknown how many inhabited the area (Draft Plan/EIS, p. 144). As stated in the Draft EIS (p. 12), lands on the National Elk Refuge were set aside as a "winter elk refuge." While the purposes were later expanded to include conservation of other big game species, elk remain the priority species on the refuge.
21-78	<p>Therefore, we recommend that bison numbers in the Jackson Elk Herd unit boundary area be managed at an average of 650 animals, and that a herd objective be reviewed every five years in collaboration with the WGFD in order that management perpetuates habitat and herd health in accordance with NPS and FWS missions, purposes, and policies.</p>	21-78. See responses 21-12, 21-49, and 21-77.
21-79	<p>We recognize past occurrences of immigration and we support that bison from Yellowstone Park naturally travel south to Jackson Hole and occasionally contribute additional animals and additional genetics to the JH bison herd. Instead of managing for 400 (Alternatives 5 & 6) or even 500 bison (Alternative 4) we recommend that the JH bison herd be managed at approximately 650 bison and that the 650 bison are distributed outside of</p>	21-79. See responses 21-45, 21-46, 21-47, 21-77, and 21-78. Establishing a bison herd in the Gros Ventre River drainage and Buffalo Valley is outside the agencies' jurisdiction. Bison within the Thorofare area of Teton Wilderness are not considered part of the Jackson bison herd.

Comment No.	Letter 21 (cont.)	Response
21-79 (cont.)	<p>Yellowstone Park throughout the region defined as the Jackson elk herd unit. As for the bison inhabiting the Thorofare Area of Teton Wilderness outside of the southeast corner of Yellowstone Park, we recommend that they not be included in the 650 (and we believe that the WGFD does not include these Thorofare bison in the Jackson bison herd unit either), unless it is documented that interchange and interbreeding occurs between those "Thorofare bison" and the Jackson bison. Beyond the Thorofare consideration, the recommended region throughout which the 650 bison should be distributed should include the Jackson Hole Valley, the Buffalo Valley, and the Gros Ventre Valley, and it is recommended that no more than 100 of the recommended 650 bison spend the winter months in the Gros Ventre Valley east of GTNP. Due to a near absence of cattle grazing on USFS lands in the Gros Ventre Valley in recent years, and the fact that very few Gros Ventre ranches have livestock anymore, and according to the forage production estimate done by Greater Yellowstone Coalition, 2005, it appears that 100 bison would not increase forage consumption beyond forage availability, summer or winter.</p>	
21-80	<p>To initiate the management of the JH Bison herd to 650 animals at the earliest opportunity, the GTNP and NER should consult with the BTNF and WGFD and assist those agencies in facilitating the introduction of approximately 100 bison in appropriate age and sex ratios into the Gros Ventre Valley into the area of Dry Dallas Creek. This population of bison should be monitored by the WGFD and the BTNF and co-mingling with livestock and impacts to private property should be prevented. Regulated harvest public hunting should be used to limit the numbers to no more than 100 for the first 5 years. After this, the population could be reanalyzed by the WGFD with public involvement taking into account what impacts on habitat the bison have had, any inclination of the bison to emigrate out of the Gros Ventre Valley, impacts to private property and livestock, public opinion, and so forth.</p>	<p>21-80. See responses 21-12, 21-49, 21-77, and 21-78. The agencies believe that the Preferred Alternative in the Final Plan/EIS would enable the application of adaptive management principles for the bison herd on the National Elk Refuge and in Grand Teton National Park. In cooperation with the Wyoming Game and Fish Department, monitoring would be used to adjust herd management based on current data, new findings, and established criteria.</p>
21-81	<p>If approximately 100 bison were maintained in the Gros Ventre, and approximately 550 in the Jackson Hole and Buffalo Valleys, this would allow this bison population to be genetically sustainable particularly if occasionally YNP bison immigrated. If distribution of wintering bison was expanded as described here, we could support an <i>average</i> of 400 bison wintering on the NER. Since bison populations sustained on native winter ranges maintain brucellosis at lower levels than bison that winter on the NER and are artificially fed (Peterson, 2003:23), this would also afford managers the opportunity to experiment with different disease mitigation strategies for bison. In order for the Gros Ventre sub-herd not to be subjected to prolonged genetic isolation and possible concomitant deleterious effects of genetic isolation, natural contact via either immigration of an individual or individuals into the Gros Ventre sub-herd from the Jackson Hole main herd that results in breeding and thus additional genetics, or emigration of an individual or some Gros Ventre female bison who would return impregnated by Jackson Hole bulls would need to occur.</p>	<p>21-81. See responses 21-79 and 21-80 regarding bison objectives.</p>
21-82	<p style="text-align: center;">Impacts to Moose, Mule Deer, and Bighorn Sheep by Selecting Alternative 6</p> <p>The statement, "Moose, bighorn sheep, and pronghorn would not be directly impacted by chronic wasting disease, if it became established in Jackson Hole, under any of the alternatives because they do not appear to be susceptible to the disease (DEIS:360) is</p>	<p>21-82. The Final Plan/EIS was modified to include information about the possibility of moose or other ungulates contracting chronic wasting disease.</p>

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21-82 (cont.)	<p>apparently incorrect. Wild moose evidently can get CWD (WY Public Radio website 9/30/05). Therefore management of elk that would minimize effects should CWD become established in Jackson elk herds should have a positive effect on moose (see our comments and recommendations above at CWD). The impacts to moose from implementation of alternatives need to be more thoroughly analyzed than in this DEIS.</p>	
21-83	<p>Mule deer, moose, and bighorn sheep are susceptible to paratuberculosis, and most if not all are susceptible to bovine TB (DEIS:363). If feeding of elk and bison on the NER were not phased out, and if bovine TB or John's disease became established in the elk and bison, the elevated prevalence in the herds would provide a continual source of infection for mule deer, moose, and bighorn sheep. Due to the behavior of bighorns this could result in those sheep being adversely affected by an outbreak of these diseases in the elk and bison (Ibid). It would constitute an irretrievable commitment of resources in the form of loss, or decreasing of populations, of vulnerable wild ungulates if CWD, bovine TB or other diseases became established in the Jackson elk or bison herds (DEIS:504-505). Therefore management of elk and bison that would minimize effects should bovine TB or John's disease become established in Jackson elk or bison should have a positive effect on mule deer, moose, and bighorn sheep (see our comments and recommendations above at Bovine TB and Paratuberculosis).</p>	21-83. Thank you for your comment.
21-84	<p>The elimination of winter feeding would not directly affect mule deer, moose, pronghorn or bighorn sheep on the NER because they do not typically inhabit the feeding sites on the NER (DEIS:361). While there is and would likely be spatial and diet competition or overlap among some groups of elk, bison, moose, mule deer, and bighorn sheep, Alternative 6 would manage for decreased densities of elk and bison, and would likely improve habitat conditions for all ungulates over the long term.</p>	21-84. Thank you for your comment.
21-85	<p>As for impacts to bighorn sheep from ceasing feeding of bison and elk on the NER, there will be little if any impact to extant populations of bighorns in the Jackson Hole Valley. There are currently very few bighorn sheep wintering in Jackson Hole. But, the agencies are no doubt aware that bighorn sheep throughout western Wyoming are at a fraction of historical numbers (USFS 2004 DEIS on High Mountain Heliskiing permit; Dorsey 2002 unpublished) and are currently declining from those small remnant populations (Dorsey 2005 unpub., WGFD JCR's 2003 and others). While the WGFD maintains that ceasing feeding elk at any of the feedgrounds including the NER will have detrimental impacts to bighorns, they are incorrectly basing their conclusion on the assumption that feeding elk prevents or at least minimizes interspecies competition on winter range. We refer the agencies to the 2001 report from Yellowstone Park about ecology of wild ungulates on the northern YNP winter ranges that documents the spatial and diet components of those sympatric species of mule deer, elk, bison, bighorn, and pronghorn. Also, the WGFD and others ignore the facts surrounding the decline of bighorn sheep in the very geographic areas in western Wyoming where there have been elk feedgrounds for 50-90 years. Since bighorn sheep in western Wyoming are not even stable, they are declining, there is no evidence that feeding large numbers of elk on feedgrounds have ever benefited or will benefit bighorn sheep conservation. As we show regarding diseases, including brucellosis (T. Kreeger, WSVL 2005), quite the opposite is likely true.</p>	21-85. Competition could increase in some areas but, given bighorn preferences for escape terrain and nearby areas (Smith 1991), it may be limited by habitat preferences. Northern range data on elk/bighorn relationships have been inconclusive (Houston 1982; Singer and Norland 1996).

Comment No.	Letter 21 (cont.)	Response
21-86	<p>If paratuberculosis or bovine TB became established in Jackson elk and bison herds, and if winter feeding continued on the NER "the elevated prevalence in the herds would provide a continual source of infection for mule deer, moose, and bighorn sheep" (DEIS:363). If CWD became established in Jackson elk herds, it is possible that environmental contamination and/or direct interspecies transmission could affect mule deer and moose.</p>	<p>21-86. Thank you for your comment.</p>
21-87	<p>"Alternative 4 would be more detrimental to mule deer, moose, and bighorn sheep on the refuge than . . . possibly any other alternative," (DEIS:371). While the implementation of Alternative 6, along with the phase out of the 3 feedgrounds in the Gros Ventre would affect the current distribution of elk and bison by decreasing densities and spreading them out over a larger area, and may result in a concomitant increase in browsing of deciduous woody plants, sagebrush, and other upland shrubs in certain areas, management actions and natural influences such as predators and species-specific habitat selection would likely mitigate adverse impacts and would likely promote beneficial effects. Agencies will adjust hunting seasons and hunt areas to affect elk and bison, and other ungulate, distribution which can alleviate some adverse impacts from ungulate herbivory. The conservation of large predators can also affect ungulate distribution and have positive impacts on regeneration of woody plants and shrubs by alleviating ungulate herbivory as has occurred in Yellowstone Park (Yellowstone Science Winter 2005:32-33, see additional below) and the Gros Ventre Valley (DEIS:113).</p>	<p>21-87. The Draft Plan/EIS (pp. 369–71) acknowledged that there could be increased competition on the National Elk Refuge compared to other alternatives, primarily due to the increased use of the northern end of the refuge by elk in non-fed years and the exclusion of nearly 1,000 acres of aspen habitat. In areas such as Grand Teton National Park, Bridger-Teton National Forest, and other lands it is not clear whether Alternative 4 would have a net beneficial or detrimental effect (Draft EIS, pp. 370–71). It is difficult to predict the extent of impacts of the alternatives for several reasons. First, only some of the elk that have wintered on the refuge would disperse, and this number cannot be predicted. Second, ungulates often differ in habitat choices and may remain separate by choice in wintering areas. In addition, deer, moose, and bighorn sheep populations in Jackson Hole have been declining for unknown reasons while feedgrounds have restricted the winter distribution of Jackson elk. The agencies believe that the adaptive management emphasis of the Preferred Alternative in the Final Plan/EIS would allow management options to be monitored and adjusted to benefit other ungulate species.</p>
21-88	<p>The definitive 2001 report on the Northern Range of Yellowstone Park, "found no evidence that the population size of elk had a major depressing influence either upon population growth rates or on productivity rates of other ungulates," (nps.gov/yell/nature/northernrange/ch6d.htm). While this does not absolutely rule out effects on one species or another resulting from large numbers of elk, if managers implement plans that incorporate the principles of wildlife management (see <i>Wildlife Management Principles Applicable to the Bison and Elk Management Planning Process for the National Elk Refuge and Grand Teton Park</i>, 12/18/04 by D. DeLong) and if those plans achieve appropriate population densities, distributions, and interspecific ratios that best mimic presettlement conditions and are at or below the carrying capacity of the habitat, healthy populations and habitat are expected to result and be sustainable. Alternative 6 with some improvements does incorporate the principles of wildlife management and is the best alternative for the agencies to implement.</p>	<p>21-88. See response 21-14 with respect to the DeLong reference. The Draft Plan/EIS (p. 16) acknowledged that the U.S. Fish and Wildlife Service must base management decisions on sound principles of wildlife management and scientific information. See response 21-89 regarding the Preferred Alternative in the Final Plan/EIS.</p>
21-89	<p>We feel that the DEIS is incorrect at page 376 where it indicates that potential for increased elk use of native range in the Gros Ventre would result in "further degradation and loss" of willow and cottonwood habitats. This conclusion runs counter to the statement of the WGFD habitat biologist (DEIS: 113) that indicates that with the presence of wolves, elk use on aspen habitats has decreased, and we feel that Yellowstone Park studies have shown that wolf influences on elk distribution have allowed regeneration of willow habitats (Yellowstone Science Winter 2005:32-33). Therefore, we feel that the conclusions in the DEIS either ignores or downplays the effects of predators on the distribution and feeding</p>	<p>21-89. See response 21-87. As stated in the Draft Plan/EIS (p. 113), no formal research has been undertaken to determine the effects of wolves on willow and cottonwood habitats as a result of dispersing elk. The discussion on page 376 was based on a predicted increase in elk distribution under Alternative 6 for the short term. While the presence of wolves in Yellowstone National Park could influence elk distribution, given the uncertainty of potential conflicts with wolves in the Gros Ventre (p. 346), it would be difficult to compare without formal research. The language was clarified in the Final Plan/EIS to reflect the uncertainty of how wolves could affect elk distribution and ultimately the effect on willow and cottonwood habitats.</p>

Comment No.	Letter 21 (cont.)	Response
21-89 (cont.)	<p>habits of ungulates and the resulting effects on woody plant species even in the matter of the potential of <i>additional</i> elk and bison using native range.</p> <p><u>Need for Revising the Cooperative Agreement</u></p>	
21-90	<p>Goals and objectives that have been developed in part to accommodate interests of the state, tribes, municipal governments, and the public must meet substantive provisions of law and policy before they can be implemented (DeLong 2005:3). There are no legal requirements for the NER to sustain higher-than-natural densities of elk or bison or to maximize its contribution to the WGFD herd objectives (Ibid:17).</p>	<p>21-90. See response 21-14 with respect to the DeLong reference. See response 21-20 regarding goals and objectives.</p>
21-91	<p>FWS policy also directs that wildlife populations must be sustained at levels consistent with refuge objectives (701 FW 1.3), and this assumes that refuge objectives addressing population levels are consistent with legal mandates as required by 601 FW 3.4.C(1)(g) (DeLong 2002:8).</p>	<p>21-91. See response 21-14 with respect to the DeLong reference.</p>
21-92	<p>Any pre-existing interagency agreements, management plans or portions thereof, such as population objectives for the management of either elk or bison in the Jackson Hole region, that seek to maintain elk or bison at populations that are too high for the carrying capacity of the range or the health and sustainability of the elk and bison, or too low to fulfill legal directives, will need to be revised based on the need for federal agencies to fulfill their legal directives. This would apply to the 1974 Cooperative Agreement between the USFWS and the WGFD that specifies a maximum figure of 7,500 elk on the NER, the implementation of which when it involves artificial feeding on the NER and concomitant damage to natural resources and disease risks and occurrences does not allow the federal agencies, both the NPS and the FWS, to fulfill their legal directives as these comments and attached documents clearly show.</p>	<p>21-92. Once the Record of Decision for the Final Plan/EIS is published, the U.S. Fish and Wildlife Service will determine if or how the 1974 Cooperative Agreement with the Wyoming Game and Fish Department will need to be revised.</p>
21-93	<p>The 1974 Cooperative Agreement among all the agencies involved in managing the JEH states that the 7,500 objective for elk numbers on the NER during winter " . . . may be revised based on habitat conditions, forage production and other data"; we believe that this Management Plan and Environmental Impact Statement is the time to instigate a revision of that agreement in order for an objective to be determined that is "consistent with legal mandates " of both the NPS and FWS. If the agencies choose Alternative 6 with some improvements as recommended herein, that decision and implementation will enable the federal agencies to manage resources on GTNP and NER lawfully.</p> <p><u>Restoration of native plants</u></p>	<p>21-93. See response 21-92. As a point of clarification, the 1974 Cooperative Agreement is only between the U.S. Fish and Wildlife Service and the Wyoming Game and Fish Department. A 1958 memorandum of understanding was signed between all the agencies involved in managing the Jackson elk herd, and that memorandum established the advisory program known as the Jackson Hole Cooperative Elk Studies Group.</p>
21-94	<p>The NPS is required to maintain the full range of habitat conditions that naturally occurred in the area, and is required to allow natural fluctuations in the evolving park ecosystems (NPS 2000:4.1), and both of these are integrally related and inseparable. (The NPS) will try to maintain all the components and processes of naturally evolving park ecosystems, including the natural abundance, diversity, and genetic and ecological integrity of the plant and animal species native to those ecosystems. (Ibid). The NPS is required to return human-disturbed areas to the natural conditions and processes characteristic of the</p>	<p>21-94. Under Alternatives 2 through 6 in both the Draft and Final EISs, the National Park Service would initiate projects to restore about 4,500 areas of previously cultivated areas to native plant communities in Grand Teton National Park. There are no plans for other habitat restoration projects as part of this planning process.</p>

Comment No.	Letter 21 (cont.)	Response
21-94 (cont.)	<p>ecological zone in which the disturbed area is situated (NPS 2000:4.1.5) (DeLong 2005: 24). Even in areas where sagebrush has recolonized, if there are non-native grasses that are dominant, the NPS is required to restore the area to native forbs, grasses, and shrubs.</p>	
21-95	<p>Restore previously cultivated fields within GTNP where possible. "NPS policy requires that revegetation efforts make use of seeds, cuttings, and transplants that represent species and gene pools native to the ecological portion of the park in which the restoration project is occurring (NPS 2000:4.4.2.4) (DeLong/Behrens 2005:9). GTNP should undertake an aggressive, adaptive management approach for large-scale restoration of native plant communities, and both agencies should continue their involvement with the Teton County Weed and Pest District to eradicate where possible and otherwise control noxious weeds.</p>	<p>21-95. See response 21-14 with respect to the DeLong/Behrens reference and response 21-94 regarding proposed revegetation under Alternatives 2 through 6. The agencies would continue to control invasive weeds independent of any alternative selected (Draft Plan/EIS, p. 38).</p>
21-96	<p>Noxious weeds should be kept under control on all habitats grazed by elk and bison and, since weeds can establish themselves in disturbed soils quickly, the NER should minimize farming portions of the refuge where possible, and should restore native plants where cultivation has occurred in past decades where possible.</p>	<p>21-96. See response 21-95 regarding the control of invasive weeds.</p>
21-97	<p><u>Livestock and Winter Range Management:</u></p> <p>Since some of the diseases that affect livestock can also affect wildlife, and some diseases that may be introduced into an area may affect both, it is important that commingling between livestock and big game be minimized. The USFS took very important steps to mitigate some of the early conflicts over forage utilization on the range over 80 years ago by removing from livestock grazing some of the range critical to the survival of big game during winter (see comments above). In the Jackson Hole area this occurred in the lower elevations in the Gros Ventre Valley, also USFS lands east of the NER in the Curtis Canyon area, and along the west facing slopes from Jackson south to Hoback above Hwy 191. This component of range management on USFS land, originally intended to appropriately allocate forage, offers additional dividends today by facilitating spatial separation between livestock and big game which can minimize interspecies disease transmission concerns. The USFS, the NPS, WGF, and the NER also restrict human activities in some areas of big game winter range, which is very important for facilitating the maximum natural effectiveness of winter range. The "Don't Poach The Powder" campaign in Jackson Hole (JHCA 2005) is one project that has shown success in educating the public, involving diverse constituents, and resulting in winter range protections. [The NPS and FWS are required to work] with other land management agencies, wildlife management agencies, and private landowners [to] facilitate the sustainability of migratory populations of wildlife and the long-term sustainability of their habitats (USFWS 1996:052 FW 1, USFWS 1999, NPS 2000:1.5, 4.4.1.1) (DeLong 2005:68).</p>	<p>21-97. See response 21-14 with respect to the DeLong reference.</p>
21-98	<p>We applaud management of critical big game winter ranges that protects the forage needed by wildlife, and we also recommend that agencies support other livestock-specific management that will benefit big game when a lawful and principled bison and elk management plan is implemented in GTNP and the NER. The NPS should cease cattle grazing in GTNP in the Elk Ranch area of GTNP, and also cease grazing cattle on pastures within GTNP in the area of Mormon Row, Antelope Flats, Kelly, and around the base of</p>	<p>21-98. 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 park, and some allotment acres were not used (Draft EIS, p. 180). The Final Plan/EIS was updated to include 2005 information. Some areas of critical elk habitat in the Bridger-Teton National Forest are closed to cattle grazing. The Draft EIS discussed many of the impacts with respect to grazing under "Social and Economic Impacts: Impacts on Livestock Operations" (pages 487-503).</p>

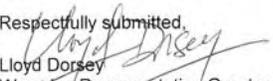
Comment No.	Letter 21 (cont.)	Response
21-98 (cont.)	<p>Blacktail Butte. For the agencies to fulfill their legal directives, meet their goals, cease feeding elk and bison on the NER, decrease densities and still provide appropriate populations of elk and bison for the area, the appropriate allocation of forage to wildlife in these areas of GTNP regardless of the season of use by big game is critical to achieving success. Although often outside the immediate jurisdictions of GTNP and the NER, agencies should collaborate on creative solutions to livestock/wildlife conflicts. It is within the limits of acceptable wildlife management practices and agency policies for the USFWS and NPS to attempt to influence management and land use practices outside of the NER and GTNP to the extent these would contribute to the accomplishment of refuge and park purposes and the welfare of wildlife inhabiting the two areas (USFWS 1996:052 FW 1, USFWS 1999, USFWS 2001:601 FW 3.7.C and 3.20, and NPS 2000:1.5, 4.4.1.1) (DeLong/Behrens 2005:39-40).</p>	<p>21-98 (cont.). Cattle do not graze on winter range in Grand Teton National Park, nor are they grazing in areas used by bison, so the competition for forage is minimal. Cattle are not moved onto summer grazing allotments until about 95% of elk calving is finished. Eliminating grazing in the park would not address the core issue identified in the Draft Plan/EIS (pp. 9–10), which is the lack of winter range, nor would it reduce the prevalence of brucellosis or the risk for other diseases in the herd. See response 21-14 with respect to the DeLong reference. The agencies currently work cooperatively with the Wyoming Game and Fish Department, the Forest Service, and others to improve habitat and address other wildlife concerns, and these efforts will continue regardless of the decisions made in Record of Decision (Draft EIS, p. 38).</p>
21-99	<p>The USFS can change summer cattle grazing permits in the Jackson Hole region from cow/calf pairs to steers, which would mitigate some wildlife/livestock disease transmission concerns. The trailing of cattle off of summer range through designated big game winter range or transitional range on public lands should be done in a manner, facilitated by an appropriate number of riders, which removes only the minimum amount of forage to expeditiously get the cattle through that critical range. Cattle should not be allowed to leisurely graze their way through designated big game winter range at the end of the growing season because that forage should be allocated to wintering big game during the severe winter months. The GTNP and the NER personnel should be integrally involved in these types of management decisions on USFS and other lands.</p>	<p>21-99. See response 21-98.</p>
21-100	<p>And, whether it's in the Gros Ventre, Buffalo Valley, Spring Gulch or wherever in the Jackson Hole area, all agencies should collaborate wherever possible to assist landowners and livestock owners to "elk-proof" their haystacks, livestock feedlines, and other private property that may need stackyards or fences. We note that in the DEIS Table 2-2, there is a line item expenditure of \$100,000 per year for approximately 5 years from the NER allocated under Alternative 6 for, "Elk/Bison Conflict Resolution on Adjacent Lands". This amount, with additional funds included in the WGFD annual budget for exactly such expenditures (WGFD Annual Report 2004), will go a long way towards enabling the implementation of the management plan arising from this DEIS.</p> <p>Hunting</p>	<p>21-100. Alternative 4 (the Preferred Alternative in the Final Plan/EIS) was modified to include a budget to collaborate with the Wyoming Game and Fish Department to minimize conflicts with adjacent landowners through staff assistance or other financial assistance.</p>
21-101	<p>Hunting is an acceptable management tool to regulate big game populations. On refuges, hunting must be based on management programs using the best available science and must be compatible with refuge purposes. Similarly, the GTNP elk reduction program is a legitimate management tool, "when it is found necessary for the purpose of properly managing and protecting the elk" in accordance with Public Law 81-787, Section 6 (DeLong/Behrens 2005). Hunting can take place on the NER only after a balanced wildlife conservation program has been designed and only if it is compatible with the refuge mission and purposes.</p>	<p>21-101. See response 21-14 with respect to legal directives and the DeLong/Behrens reference.</p>

Comment No.	Letter 21 (cont.)	Response
21-102	<p>Hunting pressure in a given area may affect elk use of that area and, in some circumstances where the landscape is more open or hunter density is high, cause elk to abandon or quickly move through an area. The elk reduction program in GTNP should be done as expeditiously and efficiently as possible to achieve the population reduction goals, and then allow the areas of the hunt to be used by elk and other big game as much of the late fall and winter as possible. Hunting in the late fall and early winter in the southern portion of the NER may help the agencies to achieve the harvest goal quicker, may cause elk to redistribute from the southern portion of the NER to the northern portion in the Gros Ventre hills or even onto USFS lands for the early winter, and may increase the winter long carrying capacity of the Refuge without supplemental feeding for bison and elk (Bailey 1999 in DeLong 2005:12-13). See below for additional comments on hunting the southern area of the NER.</p>	<p>21-102. See response 21-14 with respect to the DeLong reference.</p>
21-103	<p>Also, in cooperation with the WGFD, hunting seasons and areas can be modified to assist in keeping elk and possibly bison <i>in</i> a general area, such as the Gros Ventre Valley or Buffalo Valley; although the agencies should recognize the ecological value of nomadic shifts in big game distribution during winter which can be entirely natural and should be allowed by agencies as much as possible. These periodic shifts in distribution by small or large groups of big game can be natural predator-avoidance techniques, or a means of utilizing new foraging areas and allowing other foraging areas to receive less herbivory, and can be a means of acquiring relief from snowpack, winds, or other severe winter conditions. If, however, the shifts by groups of big game are induced by human causes such as skiing or snowmobiling on winter ranges or outside designated routes, the agencies should address the human incursion into winter range issue and mitigate that problem.</p>	<p>21-103. Thank you for your comment.</p>
21-104	<p>Once the overall Jackson elk and bison herds are reduced to numbers and distribution more in balance with available habitat (and to numbers and distribution that allow agencies to comply with legal directives), hunt seasons and areas can be adjusted to distribute animals and/or restrict animal movements in a manner that will forestall potential conflicts such as damage to private property, commingling with livestock, or undesirable densities on particular winter range complexes. For example, a late season hunt for elk in the area of the Gros Ventre Valley immediately east of the GTNP boundary, including the state section near Kelly Warm Springs, may help in preventing movement of elk from the Gros Ventre Valley westward, thus encouraging the preponderance of elk to remain wintering in the Gros Ventre where potential conflicts with private property and livestock may be fewer than in the Jackson Hole Valley. Conversely, as mentioned above for the elk reduction in GTNP, hunting may cause diminished use of an area valuable for winter range, so managers will have to work with the WGFD and employ adaptive management, trying various methods and changing hunting use and timing where needed.</p>	<p>21-104. The agencies would continue to work cooperatively with the Wyoming Game and Fish Department in their efforts to manage harvest levels for the Jackson bison and elk herds.</p>
21-105	<p>Hunting of elk in both jurisdictions and of bison on the NER should be conducted in cooperation with the WGFD to help them maintain appropriate numbers throughout the region. The hunts should also help reduce densities of elk to help reduce the spread and incidence of diseases such as brucellosis, pasteurella, CWD, and other diseases (DEIS:50). As cited as part of the Alternative 6, the southern part of the NER could be opened to hunting early in the fall under guidelines emphasizing safety and the achievement of</p>	<p>21-105. Thank you for your comment.</p>

Comment No.	Letter 21 (cont.)	Response
21-105 (cont.)	<p>management goals. Opening this area at a propitious time during the early to mid fall may assist managers in achieving an adequate harvest of elk that summer in GTNP and may protect forage better reserved for elk and other big game for the harsh winter months. The FWS will need to determine if a hunt on the southern portion of the NER can be conducted safely; merely opening that area of the NER to <i>non-hunting</i> uses by the public during those times may be all that's needed to accomplish forage use and population management objectives, and may involve fewer agency resources to implement.</p>	
21-106	<p>Researchers should continue to collar elk that summer in GTNP in order to assist in harvest objectives but also to help determine if elk summering in GTNP spend the winter any other place than the NER, such as on private lands south of GTNP, or USFS lands east of the NER. Such information will assist managers in managing for an appropriate population of elk in GTNP.</p>	<p>21-106. The agencies agree that research and monitoring are important in achieving habitat and population objectives.</p>
21-107	<p style="text-align: center;"><u>Cease Feeding Elk in Gros Ventre Valley; Restore Migrations</u></p> <p>The WGFD should promptly cease feeding elk at the 3 feedgrounds in the Gros Ventre Valley east of Jackson Hole once Gros Ventre-area haystacks on private lands are "elk-proofed", and vulnerable winter livestock feedlines are fenced in as well. Most of them already are and therefore the amount of time, money, and effort would be minimal. Fencing any remaining haystacks and the remaining feedlines could be accomplished in a few weeks. As the <i>Brucellosis Solution-Gros Ventre Pilot Project</i> (GYC 2005) has demonstrated, feeding at the Gros Ventre feedgrounds can be immediately terminated once a few simple objectives are expeditiously met. This report also details other examples of terminating elk feedgrounds that were either partially or wholly successful. All stakeholders including federal and state agencies can build on these prior examples.</p>	<p>21-107. None of the alternatives in either the Draft or Final EIS proposes eliminating feeding at the three state feedgrounds in the Gros Ventre River drainage as this is outside the agencies' jurisdiction. The Wyoming Game and Fish Department has no current plans to phase out supplemental feeding on these feedgrounds.</p>
21-108	<p>GTNP and the NER need to add into Alternative 6 the component of Alternatives 2 and 3 that commits the NPS and FWS to supporting stakeholder efforts to establish elk migrations out of Jackson Hole to other wintering areas; and then select that modified Alternative 6 as the management plan with other improvements suggested in these comments. Phasing out the Gros Ventre feedgrounds, and the other feedgrounds such as Muddy Creek, North Piney, etc., noted in the <i>Brucellosis Solution . . .</i> report (GYC 2005) are the first steps that need to be taken to protect and enhance big game migrations. While the Jackson Hole area (including Buffalo and Gros Ventre Valleys) can offer substantial acreages of protected winter range for big game in perpetuity (if managed appropriately), and while there is extant elk, pronghorn, and mule deer interchange between this area and the Wind River and Green River basins, it is important for sustainable ecosystem function that feedgrounds are phased out and for big game migrations to continue and improve. Such endeavors and achievements enable the NER and GTNP to fulfill legal directives noted in these comments.</p>	<p>21-108. See response 21-107 regarding the state feedgrounds. Under Alternatives 2 and 3 some migration out of Jackson Hole could occur, and the agencies would actively support others in their efforts to establish migrations to other suitable habitat. Under Alternative 6 there is less potential for migration out of the Jackson elk herd area and is therefore not necessary as an option. Under the Preferred Alternative in the Final Plan/EIS it is not likely that migrations into other areas would occur, nor is there support by the Wyoming Game and Fish Department for migration into other areas.</p>
21-109	<p>As noted above at Livestock and Winter Range Management, the NPS and FWS have the legal ability to work with other jurisdictions to effect collaborative management strategies that allow the federal agencies to fulfill legal directives. Both GTNP and the NER need to energetically work with the WGFD and Game and Fish Commission to help them</p>	<p>21-109. The agencies will continue to work collaboratively with the Wyoming Game and Fish Department and others to manage the Jackson bison and elk herds and to improve habitat, but they disagree that they have any authority or jurisdiction to "effect collaborative management strategies" outside the boundaries of either the National Elk Refuge or Grand Teton National Park to fulfill their legal directives.</p>

Comment No.	Letter 21 (cont.)	Response
<p>21-109 (cont.)</p>	<p>cease feeding at the Gros Ventre feedgrounds on both state and federal lands as an initial step beyond the decision arising from this DEIS. GTNP and the NER should also work with the BTNF-USFS to help ensure that that agency complies with legal directives such as the National Environmental Policy Act and other laws when considering permits for elk feeding by the State of Wyoming, in order that at the very least an adequate and comprehensive analysis is conducted that discloses all the reasonably determinable impacts arising from feedgrounds. Since, as noted above, it is within the legal ability to do so and it serves to facilitate the fulfillment of their agencies' legal directives, the superintendent of GTNP and the manager of the NER should write a letter bearing both their signatures to the supervisor of the Bridger-Teton National Forest to this effect including suggestions on how to address any existing feedground permits that may be legally deficient. GTNP and the NER should also contact the Pinedale-BLM Area manager in the same manner to similarly address the elk feedgrounds within that jurisdiction.</p> <p><u>Costs and Savings</u></p>	
<p>21-110</p>	<p>The agencies will need to undertake habitat improvement projects and other management actions specific to the elk and bison management plan arising from this DEIS, and will need to allocate and spend money to accomplish these actions (DEIS:78 Table 2-2, 2-3). While we note and agree with the cost savings under Alternative 6 for winter feeding program (\$0 costs) compared with the preferred Alternative 4 of \$297,340 annually to feed the bison and elk, we question the addition of \$100,704 annually for "Additional costs during initial implementation"; we question the absence of contributions to the NER from the winter concessionaire sleigh rides under Alternative 6- we feel that the sleigh rides can still occur in the absence of feeding of elk and bison since elk and bison will still winter on the Refuge; and we question the need for \$218,275 annually for "Refuge Forage Production". We understand that forage production will occur for the next few years, but encourage the NER to diminish farming of the NER where possible and allow the elk and bison to winter on native range as much as possible. Once the elk and bison densities are decreased on the NER, we feel that cultivation, sprinkler irrigation, and other farming practices can be reduced. We request that the agencies revisit the above questions.</p> <p><u>Adaptive management</u></p>	<p>21-110. While the agencies agree that some form of sleigh rides would be possible under Alternative 6, it would be unlikely given the marginal profitability under base-line conditions. Therefore, for estimation purposes it was eliminated. It should be noted that a comprehensive conservation plan will be developed for the National Elk Refuge following completion of the Bison and Elk Management Plan. At that time, opportunities for compatible wildlife-dependent recreation will be more fully addressed. Adaptive management was built into Alternative 6 to allow for the possibility that management actions such as refuge forage production could be reduced if monitoring indicated it was no longer needed to sustain elk and bison.</p>
<p>21-111</p>	<p>Habitat and wildlife population management by the NPS and the USFWS should be based on information obtained through consultation with technical experts, literature review, inventory, monitoring, and research. We understand that many of the numbers of elk and bison offered in the various Alternatives are based on results of the forage allocation model by Hobbs, et al, 2003, other published information, and professional opinion. (DeLong 2005:49). It is important to remember that there is a margin of potential error associated with not only the model but other sources as well. It is necessary to begin implementation of the decision immediately due to legal, ecological, and epidemiological concerns. Implementing Alternative 6 with improvements should be considered a starting point and progress and outcomes of the various management actions should be monitored and adjusted if needed over time within the parameters of legal directives.</p>	<p>21-111. See response 21-14 with respect to the DeLong reference. See response 21-30 regarding the adaptive management elements of the modified Alternative 4 in the Final Plan/EIS.</p>

Comment No.	Letter 21 (cont.)	Response
21-111 (cont.)	<p>The principles of adaptive management should be used to monitor the progress of initial agency actions resulting from this decision, determine if they meet the goals and allow the agencies to fulfill legal directives, and modify continued actions within the parameters of the decision if necessary. While the agencies should be proactive on some of the management actions resulting from this decision (e.g., elk-proofing haystacks and feedlines, continuing habitat improvements under JIHI, and facilitating hunts to decrease densities of elk and bison on the NER), the agencies must monitor elk and bison numbers and distributions, resolve any private property or livestock conflict issues as they arise, monitor winter forage utilization on all area winter ranges by big game, monitor the progress of hunting, and monitor the progress of changes in habitat condition from this decision. Given the mounting concerns about wildlife diseases, ceasing feeding on the NER should be implemented at the earliest opportunity. Intensive monitoring, especially in the first years of implementation of this plan, will afford the agencies the needed information and the opportunity to respond to issues that may require changes in agency actions allowed under the management plan. Such changes can be to modify hunt seasons and level of harvest, change the manner in which woody plant species are protected from herbivory, diminish the amount and duration of feeding in the first winters post-decision in anticipation of ceasing altogether in the earliest timeframe possible, and others.</p> <p><u>Conclusion and Recommendations</u></p>	
21-112	<p>It is for the above reasons that we recommend to the USFWS and the NPS that they choose Alternative 6 as their management plan for bison and elk in Grand Teton National Park and the National Elk Refuge. We also recommend in these comments changes or additions to Alternative 6, and other recommendations; and while some of the recommendations are summarized here, there are recommendations in the body of these comments that the agencies need to address as well:</p> <ul style="list-style-type: none"> • Bison should be managed for a population of 650 to be distributed throughout the Jackson Hole region as described above, with <i>approximately</i> 400 wintering on the NER; • Consistent with the recommendation in the DEIS that maintains that under Alternative 6, vaccines "to reduce transmission" of brucellosis would be used only when they achieve higher rates of effectiveness than those currently known or used, we emphasize that the S19 vaccination program for elk on the NER should <i>cease immediately</i> and no vaccinations used for elk or bison until effective and nonintrusive vaccines for protection against brucellosis are developed; • We recommend that the agencies support stakeholder efforts to establish elk migrations out of Jackson Hole to other wintering areas, while at the same time working with other agencies and stakeholders for the continued protection and enhancement of known winter ranges in the Jackson Hole, Buffalo Valley, and Gros Ventre Valleys; <p style="text-align: right;">29</p>	21-112. Thank you for your comment.

Comment No.	Letter 21 (cont.)	Response
<p>21-113</p>	<ul style="list-style-type: none"> • Winter feeding of elk and bison on the NER should cease in the earliest possible timeframe; the agencies should work with the WGFD and USFS to implement hunt seasons and strategies that achieve a harvest of elk and bison at the earliest time possible thereby decreasing the densities of elk and bison wintering on the NER; • Farming, including irrigation and cultivation of non-native plants, on the NER should be minimized as much as possible, with native range protection and restoration taking precedent over cultivation; • Agencies should work with the WGFD and other stakeholders to elk-proof private haystacks, livestock feedlines, and other locations to make the transition of elk and bison to native winter range as efficient and effective as possible; <p>This plan has the potential to serve as one of the most important and beneficial resource management efforts for generations to come. If the agencies implement the above as rapid as possible, with the impetus being the fulfillment of legal directives and the potentially dire consequences of impending diseases, the decision and management plan arising from this environmental impact statement will provide for healthy habitat and sustainable, healthy, and free-ranging populations of big game in the Jackson Hole region. We appreciate the opportunity to submit these comments.</p> <p>Respectfully submitted,  Lloyd Dorsey Wyoming Representative Greater Yellowstone Coalition POB 4857 Jackson, WY 83001 307-734-6004 ldorsey@greateryellowstone.org</p> <p>Also see attachments provided with these comments.</p> <p><u>References</u></p> <ul style="list-style-type: none"> • APHIS, MFWP, MDOL, Gallatin NF, YNP 2005. A Status Review of Adaptive Management Elements, 2000-2005. September 2005. Bozeman, MT. http://www.nps.gov/yell/technical/planning/bison/bmpstatusreview.pdf • Behrens, J., C. Cunningham, D. DeLong. 2004. NER/GTNP Bison and Elk Management Plan Inter-Agency Meeting 2/4/04. Minutes. Jackson, WY. • Bridger-Teton National Forest-Caribou-Targhee National Forest 2003. DEIS for High Mountain Heli-skiing Permit. Jackson, WY. • Cheville, N.F.D. McCullagh, L. Paulson, N. Grossblatt, K. Iverson, S. Parker. 1998. Brucellosis in the Greater Yellowstone Area. National Research Council. Washington, D.C.. • Clifford, J.R. 2005. Letter to Ralph Morgenweck, USFWS, stamped May 20, 2005, offering APHIS' comments favoring Alternative 6 in the draft Bison and Elk 	<p>21-113. Thank you for your comments.</p>

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