JACKSON HOLE CONSERVATION ALLIANCE

November 7, 2005

VIA EMAIL AND FIRST CLASS MAIL

Bison and Elk MP/EIS
Laurie Shannon, Project Manager
National Elk Refuge
P.O. Box 510
Jackson, WY 83001

Re: Comments on Bison and Elk Draft Management Plan and Environmental Impact Statement

Dear Ms. Shannon:

22-1 On behalf of the Jackson Hole Conservation Alliance and our 1,800 members,[1] please accept our comments on the Bison and Elk Draft Management Plan and Environmental Impact Statement.

22-1. Thank you for your comment.

Introduction

22-2 JHCA is dedicated to ensuring that human activity is in harmony with the region's natural resources, particularly wildlife, so that they remain intact for future generations. Bison and elk management in Grand Teton National Park and at the National Elk Refuge is a matter of serious concern to our members. JHCA supports restoring sustainable, free-ranging, healthy bison and elk populations to healthy and diverse habitat. At the same time, the Alliance aims to maintain the social and economic values presently derived from Jackson Hole bison and elk herds. We support wildlife management that will restore natural ecological functions on a landscape scale for bison and elk and native species of plants. This includes healthy and significant numbers of bison and elk and natural fluctuations in the populations and densities of these animals.

22-2. Thank you for your comment.

22-3 Unfortunately, the management of bison and elk at the NER has not resulted in healthy habitat or wildlife populations and has run counter to promoting free-ranging, migratory herds. Rather, through the practice of winter feeding, bison and elk are artificially concentrated for several months each year, creating conditions that result in severe habitat degradation and keep brucellosis at relatively high rates. These supplemental feed handouts to wildlife have kept bison and elk numbers at inflated rates, far above Wyoming Game and Fish Department herd objectives and far above what the landscape can sustain.

22-3. Thank you for your comment.

22-4 Population abundance is a critically important factor to JHCA members, members of the community and millions of visitors each year. That is why we are so concerned about the winter

22-4. Thank you for your comment.

[1] Defenders of Wildlife, a national wildlife group with 490,000 members, joins these comments.

Comment No.	Letter 22 (cont.)	Response
22-4 (cont.)	feeding program and the associated problems. Put simply, winter feeding may "appear" to be "working" now, given high wildlife numbers. However, in reality, this practice is wildlife roulette, with bullets loaded in five out of six chambers. The real threat to long-term vitality of our wildlife herds is disease and the risk of catastrophic loss should chronic wasting disease or bovine tuberculosis arrive at the Elk Refuge. Once people move past the grandstanding and hyperbole, anyone truly looking out for healthy and abundant wildlife in the long-term should promote a controlled phaseout of winter feeding. The NER should follow the lead of Montana where this type of practice is illegal because of the disease problems that feeding creates.	
22-5	We recognize that as feeding has been going on for nearly a century, the practice cannot stop overnight. Rather, we advocate for a gradual and complete phaseout of feeding within five years; we note that our position is *exactly the same* as one of the leading animal disease agencies, the Animal and Plant Health Inspection Services. A controlled phaseout of feeding will come with some transition pains – something the entire community and all stakeholder groups will have to contend with so that wildlife can have a better future in Jackson Hole. JHCA advocates paying close attention to protecting ranchers, the livestock industry and private property owners during the phaseout.	**22-5.** Thank you for your comment.
22-6	Fortunately, GTNP and the NER, have thousands of acres of productive forage and are surrounded by thousands of acres of winter range habitat for elk. Thus, phasing out feeding is *not,* by any stretch, a phaseout of abundant wildlife populations. What will happen is a return to natural migrations and natural fluctuations in populations – ranging from 9,700 to 11,000 animals in the Jackson elk herd (as stated in the DEIS at p. 297), a number very consistent with the current WGFD herd objective of 11,029. The best solution for healthy and abundant wildlife for future generations, therefore, is a gradual and controlled phaseout of feeding.	**22-6.** Thank you for your comment.
	Wildlife Disease and Winter Feeding	
22-7	The major diseases or concern are brucellosis (already present on the NER) and chronic wasting disease – within 90 miles of the Jackson elk herd. Brucellosis is a bacterial disease found in bison, elk and cattle. The bacteria, *Brucella abortus* causes animals to spontaneously abort fetuses. Infected cattle will lose calves to abortions; in reality, the disease itself isn't that harmful to wildlife. Many infected bison are unaffected and some infected elk may lose their first fetus, but not subsequent calves. It is generally accepted that cattle are the original host for brucellosis and are responsible for then transmitting it to free-ranging wildlife when the West was settled.	**22-7.** Thank you for your comment.
22-8	Brucellosis is primarily spread through contact with fluids and the placenta during the birthing or abortion process. In free-ranging elk, the disease is maintained at very low levels of 1 to 3%. However, when in conditions that unnaturally cluster or congregate the animals, the disease rate runs much higher and as much as 50%. On the refuge, 29% of elk are seropositive and bison range from 58% to 84% seropositive for brucellosis.	**22-8.** Thank you for your comment.
22-9	The correlation between winter feeding and high incidents of brucellosis in elk is scientifically unquestioned. The DEIS states that brucellosis transmission among elk is "generally thought to be largely influenced by high concentrations of elk associated with winter feeding programs." DEIS at p. 127. Indeed, without winter feeding, elk in the Greater Yellowstone Ecosystem have an average seropositive rate of 1.65%, whereas winter-fed refuge elk average 28.56%. The DEIS also provides that "No elk populations outside the Greater Yellowstone Area are known to be infected with	**22-9.** Thank you for your comment.
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Comment No.	Letter 22 (cont.)	Response
22-9 (cont.)	brucellosis. This is because elk under normal (non-feedground associated) circumstances isolate themselves during birth and clean up birthing products at the site." DEIS at p. 127. There should be no question, therefore, about the direct causal relationship between artificial feeding and high levels of wildlife disease.	
22-10	Chronic wasting disease (CWD) is a neurological disorder in deer and elk that causes holes to form in the brain, leading infected animals to wither away and die. Prions, inert, deformed proteins, are widely believed to cause the disease. Once contracted, CWD is always fatal. Once an area is contaminated, it can stay that way for years, infecting new animals coming to a site. CWD is believed to be spread by contact with feces or neurological material. In Wyoming, CWD has been found in elk and deer, mainly in southeastern portions of the state. In recent years, the disease has moved to within 90 miles of the Jackson elk herd. In November 2005, WGFD reported that two mule deer on the Wind River Reservation were infected with CWD.	**22-10.** The Final Plan/EIS was updated with current information through 2005 on chronic wasting disease.
22-11	The big risk and possible wildlife time-bomb is what might happen when CWD arrives in the Jackson elk herd and the concentrated conditions at the NER, in addition to 22 state-run elk winter feedgrounds. What we do know about the potential for CWD to spread in high density conditions is not encouraging.	**22-11.** Thank you for your comment.
22-12	The DEIS states that transmission of CWD is related to the density of susceptible hosts such as elk on the NER. The prevalence of CWD in free-ranging (i.e., not artificially fed) wildlife can range from 2% to 4% in elk and 15% to 18% in deer. DEIS at p. 133. The DEIS notes that in confined situations prevalence can be much higher. For example, in an infected game farm in Nebraska, CWD prevalence in white-tailed deer reached over 50%. Game farm elk may reach infection rates of up to 59%. DEIS at p. 133.	**22-12.** Thank you for your comment.
22-13	Additional information comes from Appendix F to DEIS, prepared by Markus J. Peterson at the request of the NER and GTNP.[2] Dr. Peterson notes that: > High elk densities associated with the National Elk Refuge . . . approximate[] 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 established in the Jackson elk herd, one should expect an epidemic; these are probably nearly ideal conditions for a CWD epidemic in free-roaming elk populations. Exhibit 1 at p. 52.	**22-13.** See response 22-16 with respect to earlier versions of the Draft Plan/EIS. The Peterson report (2003) was used as a source for the Draft EIS (p. 585) and was referenced in the document where appropriate. Copies of the Peterson report are on file at the National Elk Refuge headquarters.
22-14	In addition to CWD's higher transmission in clustered conditions like those at the NER, it is also a major problem because of long-lasting environmental contamination. The disease has the ability to persist in the environment for long periods even after intensive efforts to eradicate. At research facilities in Wyoming, for example, previously unexposed deer were infected with CWD within five years after being placed in pens that had been empty of infected animals for six months to a year.	**22-14.** Thank you for your comment.

[2] For some reason, the lead agencies decided to not include this report they commissioned in the DEIS for public review or for consideration by the agencies. JHCA believes in having all the science available in order to make the best and informed management decisions. The shelved Appendix F is attached and incorporated as Exhibit 1.

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22-15	At similar facilities in Fort Collins, Colorado, elk calves became infected and died within five years of being placed in sanitized pens – "pens that had been plowed, sprayed repeatedly with a strong disinfectant, and left empty for a year before the calf introduction." DEIS at p. 133. Therefore, if/when CWD arrives at the NER and GTNP, unnaturally high wildlife densities will facilitate much higher infection rates and ensuing death in elk, and the environmental contamination will lead to continued infection and death in elk in the future as animals repopulate or pass through the area.	**22-15.** Thank you for your comment.
22-16	Bovine tuberculosis is another disease of concern. Artificially high concentrations of ungulates is a factor that facilitates the maintenance of bovine tuberculosis. Dr. Peterson observed that elk densities on the refuge far exceed those of deer in the area of Michigan where bovine tuberculosis has reached its highest levels in wild deer (1-2 orders of magnitude higher). If elk become infected with bovine tuberculosis, this also means that bison could become infected and would likely sustain a high prevalence of the disease. Dr. Peterson observed that, "If one desired ideal circumstances for maintaining *M. bovis* [the causative bacteria for bovine TB] in a free-roaming elk population, they would have to go no further than the National Elk Refuge and other GYA feedgrounds. Moreover, because the distribution of most of GYA elk herds overlap, one would expect that unless managers took decisive action soon after *M. bovis* was recognized, this microparasite would become established on other feedgrounds and eventually would occur in elk at lower prevalences throughout the GYA." Exhibit 1 at p. 42; see also Don DeLong, *Basis of Goals and Objectives in the National Elk Refuge and Grand Teton National Park Bison and Elk Management Planning Document* (2005), attached and incorporated as Exhibit 2.	**22-16.** 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 <www.nps.gov/applications/npspolicy/index.cfm>. The reviewer's references to DeLong 2002, 2004, 2005 were sections from earlier drafts written by DeLong. As part of the evolution of any document such as 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 by the National Environmental Policy Act. The Final Plan/EIS discloses the agencies' final analysis of a range of management alternatives and 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.
	National Elk Refuge Legal Mandates	
22-17	Not only does the eventual phaseout of winter feeding make for the best future for bison and elk populations, it also is required by the applicable laws and policies governing the Elk Refuge. At the present time, with "Alternative Four" being the proposed action, our main concern is that the Fish and Wildlife Service, instead of setting its own course for the phaseout of feeding, will have a federal court direct the eventual course of action. Fortunately, in the Final EIS and Record of Decision, FWS has the opportunity to change course and adopt an alternative that lives up to its legal mandates.	**22-17.** Thank you for your comment.
22-18	The National Elk Refuge is part of the National Wildlife Refuge System. The National Wildlife Refuge System Administration Act of 1966 states that the highest priority on such refuges is the conservation of fish, wildlife, plants and their habitat. 16 U.S.C. 668dd(a)(2). "Conservation" is defined to mean "healthy" populations of wildlife. 16 U.S.C. 668ee(4).	**22-18.** Thank you for your comment.
22-19	The U.S. Fish and Wildlife manual for wildlife refuge management provides that one of the major objectives of population management on national wildlife refuges is "To ensure healthy, viable resident wildlife populations on national wildlife refuges." 7 Refuge Manual at 7.1. Other USFWS official policies require that wildlife populations be maintained at levels consistent with sound wildlife management principles, that populations be managed for natural densities and levels of variation and that population management contributes to wide species diversity. 701 USFWS Manual at 1.3; 601 USFWS Manual at 3.14.C. USFWS policies do not allow for wildlife densities to reach excessive levels that result in adverse effects on habitat and wildlife, including increased disease risks. 601 USFWS Manual at 3.14.E. These same policies do not allow management	**22-19.** Thank you for your comment.

Comment No.	Letter 22 (cont.)	Response
22-19 (cont.)	practices on the refuge that would compromise other refuge purposes such as providing habitat for other species.	
22-20	Indeed, disease is a major issue, but not the only one associated with the winter feeding program. The DEIS flatly admits that there are numerous issues that are all directly related to unnaturally high bison and elk concentrations. These include: (1) an increased risk of potentially major outbreaks of exotic disease, including bovine tuberculosis and chronic wasting disease; (2) damage to and loss of habitat due to browsing of willow, cottonwood and aspen stands, with resultant reductions in wildlife associated with healthy stands; (3) unusually low winter mortality of bison and elk (because they are fed), which affects predators; and (4) a high level of brucellosis in the elk and bison herds. DEIS at p. vi. Notably, the DEIS states without qualification that, "All of [these] biological issues identified above stem from the winter feeding program." DEIS at p. vi.	**22-20.** As stated in the Draft Plan/EIS (p. vi), there have been many benefits associated with wintering large numbers of elk and bison on the National Elk Refuge, but as the reviewer correctly states, there have also been numerous biological issues that have resulted from the feeding program.
22-21	The winter feeding of elk on the refuge runs afoul of *all* of these binding legal directives and the four major biological problems listed above. The process unnaturally congregates animals and creates an unquestioned breeding ground for disease. When elk densities are sufficiently high to increase the risk of disease and threaten the long-term health of the elk herd, this can cause irreversible or long-term adverse impacts to the herd and would conflict with the Refuge System Administration Act of 1966 and USFWS policies, all aimed at conservation of wildlife and their habitat. All of the biological issues – habitat degradation, species abundance and diversity and disease risk/prevalence – are directly related and mostly attributable to winter feeding and the ensuing high and unnatural animal densities. Therefore, the end of winter feeding is not only biologically sound but it is also legally required.	**22-21.** See responses 22-20 and 22-22. Winter feeding of elk on the National Elk Refuge is not inherently in conflict with the purposes of the refuge. As discussed in the Draft Plan/EIS (p. 6), winter feeding was originally initiated to reduce elk mortality in Jackson Hole and to offset the significant reduction of winter range in northwest Wyoming. The National Wildlife Refuge System Administration Act of 1966, as amended in 1997, specifically states in Section 5(a)(4)(D) that 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."
22-22	The major problem isn't so much that the NER is violating these policies, it is that the Refuge is *knowingly* doing so. Attached as Exhibit 3 is a 2002 report compiled by the National Elk Refuge during the formation of the EIS. In this document, the Elk Refuge summarized USFWS and NER policies that would be violated by any alternative that did not correctly prioritize refuge conservation priorities. The three main priorities of the NER are to: (1) provide sufficient winter grazing habitat to maintain a healthy, sustainable elk herd in Jackson Hole; (2) provide breeding habitat for birds; and (3) provide grazing habitat for other big game species. Once those three conservation priorities have been met, winter grazing habitat can be further enhanced, but only if "it does not measurably impair refuge habitats or cause disease problems." Exhibit 3 at p. 11. The unnaturally high densities of elk and bison on the refuge – directly related to the winter feeding program – are causing habitat degradation and increasing disease transmission. The NER, therefore, needs to select an alternative that would best meet these conservation priorities.	**22-22.** See responses 22-16 with regard to legal directives in the Draft Plan/EIS and Exhibit 3. One point of clarification, the purposes (not priorities) of the National Elk Refuge can be found on page 12 of the Draft EIS. Congress originally designated the refuge as a "winter game (elk) reserve" in 1912. The other "purposes" were added later.
	Primary Goals of Draft Management Plan	
22-23	The NPS and FWS set out four goals in selecting a management alternative for bison and elk. The first goal is habitat conservation – providing secure, sustainable ungulate grazing habitat characterized by native composition of species. The second goal is sustainable populations of elk and bison. This means healthy and natural populations of bison and elk, including natural fluctuations and reducing the risk from the adverse effects of diseases. The third goal is overall bison and elk population numbers, particularly managing in light of the WGFD Jackson Hole elk herd objective, as long as goals one and two are not compromised. Finally, the fourth goal is disease management – to reduce the prevalence of brucellosis to protect the economic interest and viability of the livestock industry, and to reduce he risk of adverse effects for other diseases such as	**22-23.** Thank you for your comment.

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Comment No.	Letter 22 (cont.)	Response
22-23 (cont.)	chronic wasting and bovine tuberculosis currently not found in the Jackson elk and bison populations. DEIS at p. ix. See also Exhibit 2 (analyzing how the alternatives meet or do not meet the goals of the management plan). **The Proposed Action: Alternative Four**	
22-24	Under this management scenario, the Jackson elk and bison herds and their habitat would be actively managed on the refuge by improving winter grazing habitat on cultivated fields. This would allow for 4,000 to 5,000 elk and 500 bison on the refuge in the winter and 1,300 to 1,600 elk in the park in the summer. Supplemental feeding would take place in above-average severity winters (estimated to be approximately 5 out of every 10 years). WGFD personnel would be permitted to continue Strain 19 to vaccinate elk, despite low efficacy. The elk hunt both on the refuge and when necessary in the park would continue to accomplish herd reduction and to provide hunting opportunities to the public. In addition, a bison hunt and a bison reduction by Native American tribes would be initiated on the refuge.	**22-24.** Thank you for your comment.
22-25	Unfortunately, alternative Four – the proposed action – falls short of accomplishing the stated goals of the management plan and also runs counter to the FWS legal directives and the conservation priorities for the refuge. Because elk will remain concentrated in roughly half of the winters, habitat degradation will continue, frustrating the first goal. This feeding scenario also frustrates the second goal, as unnaturally clustering bison and elk 50% of the winters will not lead to natural, fluctuating population levels and will not be that effective in reducing disease transmission risks. Goal three is met as high numbers of elk and bison will continue; however, goal three cannot subvert the higher priority goals of one and two. Finally, goal four is compromised because there will be enough concentration with every other winter of feeding to keep brucellosis present in high rates; in addition, animals will be concentrated enough for high risk of disease transmission should other diseases arrive in the Jackson elk herd. Indeed, the DEIS admits that the prevalence of brucellosis would only be "slightly reduced" with this management option. DEIS Summary Document at p. 10.	**22-25** See response 22-26 regarding changes made to Alternative 4 in the Final Plan/EIS. 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). As the reviewer noted, the agencies clearly described the impacts and shortcomings associated with each alternative, including the proposed action. Within the legal mandates of both agencies, there is latitude to make decisions based on sound professional judgment and other factors. The agencies believe that all the alternatives proposed in the Draft and Final EISs are reasonable alternatives that meet the purposes of the National Elk Refuge and Grand Teton National Park and that also comply with the National Environmental Policy Act. Given the 90+ year history of supplemental feeding on the National Elk Refuge, the divergent stakeholder views, and the social, economic, and political issues involved, taking action as described in Alternative 4 (Draft Plan/EIS) is a reasonable alternative.
22-26	Not only are the goals of the management plan not accomplished by Alternative Four, neither are the legal mandates governing the NER. "Conservation" of wildlife means, among other things, not managing in a way that increases the risk of wildlife disease. As admitted in the DEIS itself, Alternative Four is not much help on this point. Second, keeping animals concentrated leads to high densities, which will still be harmful to native vegetation and habitat, the *top* conservation priority for the NER. Indeed, the Elk Refuge itself, admits that, "[R]eductions in winter feeding and elk and bison numbers under this alternative may be insufficient, without further mitigation, to adequately provide for the long-term health of elk and bison wintering on the refuge in the face of an apparently imminent disease threat," and that Alternative Four, "may be only marginally consistent with management principles related to wildlife disease management." Don DeLong, *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* (2004) at p. 95 (attached and incorporated as Exhibit 4). **Alternative Five** 6	**22-26.** See response 22-16 with respect to the DeLong reference and response 22-25 regarding legal mandates. The agencies modified Alternative 4 in the Final Plan/EIS to clarify the desired conditions for this planning process and to include more of an adaptive management emphasis. The modified alternative would not identify a timeframe for phasing out feeding, nor identify how many years out of 10 that feeding would occur. 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 required to achieve desired conditions and goals. Population management, vegetation restoration, ongoing monitoring, and public education would be integral components of this framework.

Comment No.	Letter 22 (cont.)	Response
22-27	JHCA offers its comments on Alternative Five as it seems to have some support from pro-feeding and disease groups that include the Wyoming Game and Fish Department. This management option may keep elk at artificially high numbers looking at short-term economic and unrealistically high elk population objectives, but it runs counter to habitat protection, long-term health of wildlife populations and any effort to seriously address disease concerns.	**22-27.** Thank you for your comment.
22-28	Alternative Five involves "heavy" management on the refuge, with the primary emphasis being on improving forage through irrigated crops. Up to 7,500 elk and 400 bison would winter on the refuge. Up to 2,500 elk are predicted to summer in Grand Teton. Supplemental feed would be used in not only above-average, but also average winters, resulting in nine out of ten winters resorting to supplemental feed handouts. Hunting would be the same as Alternative Four. The same is also true for vaccinations.	**22-28.** Thank you for your comment.
22-29	Alternative Five, in similar fashion to Alternative Four, would not meet the plan's major goals or FWS/NER legal directives. This alternative is simply status quo, pro-feeding, pro-disease and extremely short-sighted. As admitted by the NER, this alternative ranks "second lowest (just above the No Action Alternative)" in terms of its ability to meet legal directives related to the Refuge System mission. In addition, this alternative would not facilitate natural population fluctuations. The alternative fails miserably in any relation to combating wildlife disease or preventing continued habitat degradation. This is somewhat obvious given the "feed at all costs" mentality whereby management is solely aimed at short-term high numbers of elk (and minimum bison numbers) to be achieved by maximum levels of artificial feeding whereby bison and elk will continue to be unnaturally congregated in feed lines. See Exhibit 4 at 96 (where the National Elk Refuge also states that this alternative is among the lowest in terms of consistency with generally accepted wildlife management principles).	**22-29.** See responses 22-21, 22-25, and 22-26 with regard to legal mandates, refuge purposes, and changes to the Preferred Alternative in the Final Plan/EIS. See response 22-16 with respect to Exhibit 4.
	JHCA's Recommended Position: Alternative Six (Modified)	
22-30	JHCA strongly recommends adoption of a modified version of Alternative Six. This alternative allows for adaptive management of bison and elk herds. In the short term, 2,400-2,700 elk would winter on the refuge, increasing to 3,200 over time, with 1,200 to 1,600 elk summering in Grand Teton. Irrigated fields on the refuge would provide "substantial" winter forage, in addition to native forage on the refuge and surrounding areas. Importantly, winter feeding would be phased out in five years. Hunting would be the same as in Alternatives Four and Five. The alternative puts a hold on vaccinations until ones with high efficacies are developed, a position with which JHCA agrees, adding that the vaccination should be non-intrusive to wildlife. The alternative calls for bison in the range of 400; JHCA suggests a target bison population of 450-500 animals to allow for a healthy and genetically viable population. Importantly, while alternative Six phases out feeding it does *not* by any stretch, mean the phasing out of abundant elk populations in Jackson Hole – over time, 9,700 to 11,000 elk are expected to thrive under this alternative. DEIS at p. 297.	**22-30.** See response 22-26 on modifications to Alternative 4 in the Final Plan/EIS. The agencies' Preferred Alternative in the Final EIS would adopt an adaptive management approach for achieving the biotic integrity and environmental health of the resources over the life of the plan. The agencies recommend that the Wyoming Game and Fish Department adopt a population objective of approximately 500 bison, and Alternative 6 was modified to be consistent with Alternative 4. In the Final EIS Alternative 4 (the Preferred Alternative) was modified 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, and this was incorporated into the Final Plan/EIS. It should be noted that the Wyoming Game and Fish Department sets goals and objectives for the herd through a public review process and a final departmental recommendation that is approved by the Wyoming Game and Fish Commission.
22-31	The key feature that makes Alternative Six the best option is that it squarely addresses the habitat degradation and wildlife disease concerns by phasing out feeding within five years. Biologically, it is quite simple: artificial feeding unnaturally clusters wildlife which then leads to the negative impacts on habitat and vegetation, while also significantly increasing the risk of disease transmission. Eventually ending feeding takes away these conditions and the ensuing problems. Importantly, this alternative is most consistent with the legal directives pertaining to the refuge and	**22-31.** See response 22-26 regarding changes to the Preferred Alternative in the Final Plan/EIS. See response 22-16 with respect to Exhibit 4.

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Comment No.	Letter 22 (cont.)	Response
22-31 (cont.)	would be *most* consistent with accepted wildlife management principles. Notably, the National Elk Refuge agrees with this conclusion, see Exhibit 4 at p. 97.	
22-32	The National Elk Refuge also states that this alternative, out of all of six, "would fulfill to the largest degree the provisions of the Refuge System mission related to elk and bison management on the refuge, including those related to: (1) sustaining healthy populations of wildlife in the long term in the face of an apparently imminent disease threat; (2) contributing to natural population levels and allowing for natural population fluctuations; (3) providing habitat for wildlife; and (4) restoring and maintaining biotic integrity and environmental health." See Exhibit 4 at p. 97.	**22-32.** The tables that evaluate how well the alternatives would meet the mission and purposes of the agencies were modified in the Final Plan/EIS. The agencies believe that the Preferred Alternative as modified in the Final EIS would fulfill the purposes of the National Wildlife Refuge System. This alternative calls for working collaboratively with the Wyoming Game and Fish Department and others to address the complex and difficult social issues related to bison and elk management in the Jackson herds.
22-33	Lastly, the refuge admits that compared to *every single other alternative,* this management option "would provide the best chance of retaining the refuge's ability to contribute substantively to the Jackson elk and bison herds *over the long term*." Exhibit 4 at p. 97 (emphasis added).	**22-33.** See response 22-16 with respect to Exhibit 4. Tables 2-7 and 2-8 in the Draft Plan/EIS (p. 82) describe how the alternatives rank in relation to each other based on management goals and legal directives.
22-34	Quite notably, not only has the Elk Refuge recognized that Alternative Six is superlative in terms of meeting its management goals and conservation priorities, so too has the leading agency in combating animal disease. The Animal and Plant Health Inspection Service (APHIS) within the U.S. Dept. of Agriculture supports Alternative Six because of its strong position on fighting wildlife disease and the potential outbreak of disease to livestock. The comments of APHIS merit quoting at some length: Alternative 6 (environmentally preferred alternative) meets general disease management and elimination goals better than the other alternatives offered. Specifically, Alternative 6 provides more risk mitigation and management options which will lower the risk and major adverse impacts that brucellosis and non-endemic, infectious diseases will continue to cause for the elk, bison and/or livestock populations. Moreover, the implementation of Alternative 6 would result in a lower prevalence of brucellosis in the long term as compared to other alternatives presented. . . . Alternative 6 would be 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. . . . Alternative 4 (proposed action) provides for continuation of feeding . . . [and] will still result in the unnatural concentration of animals and provide the potential for disease persistence and spread. It also allows for higher population levels. These higher populations levels combined with continued artificial feeding and increased elk concentration dramatically increases the potential for disease persistence in the elk and bison populations. Winter feeding of elk and bison is responsible for a high prevalence of brucellosis in elk and an elevated prevalence in bison. Winter feeding 8	**22-34.** Thank you for your comment. As a note of clarification, the agencies will identify the environmentally preferred alternative in the Record of Decision for the EIS.

Comment No.	Letter 22 (cont.)	Response
22-34 (cont.)	also increases the potential for spread of other diseases when they are introduced into these herds. . . . Alternative 6 more sufficiently addresses and mitigates these issues. Under Alternative 6, potential disease transmission would be reduced by sustaining lower density elk numbers for the long term and increasing the distribution [of] the elk population across a broader winter range. Since feeding would be phased out within five years, the dispersion of elk and bison would be a primary management action to reduce prevalence and transmission of brucellosis and reduce the potential for rapid spread of other diseases within these herds. . . . Again, APHIS encourages adoption of Alternative 6 (environmentally preferred alternative) as the proposed action alternative as Alternative 6 is the superlative alternative for meeting the disease management goals and objectives. APHIS Comments on DEIS (May 2005).	
22-35	In addition to best combating wildlife disease, JHCA further notes that Alternative Six is the best management option to accomplish the four primary goals of the bison and elk management plan. First, eliminating concentrated conditions will undoubtedly help restore native forbs, grasses and woody vegetation as naturally-dispersed wildlife will reduce pressure on plants species in localized areas.	**22-35.** Thank you for your comment.
22-36	Second, phasing out feeding will disperse wildlife and directly reduce brucellosis infection rates, providing for healthier bison and elk herds. The gradual return to reliance on native vegetation will directly relate to more natural populations numbers versus those that are artificially high due to winter feeding.	**22-36.** Thank you for your comment.
22-37	Third, ending the concentrated conditions will bring a return to natural wildlife densities and allow for a more natural fluctuation in wildlife populations. The current system of wildlife feeding tries to keep a static number of elk with an artificially high density on the refuge. Natural year-to-year fluctuations do not occur under the current feeding system and overall elk populations are significantly above the Jackson elk herd objective of 11,029 animals.	**22-37.** Thank you for your comment.
22-38	Fourth, there is no single better way to address the current brucellosis problem than to gradually end supplemental winter feeding. Indeed, this is also the best way to prepare for diseases such as chronic wasting disease that are headed towards the Jackson elk herd.	**22-38.** Thank you for your comment.
22-39	Quite clearly, the best available science and the leading experts in the country all agree that to best meet wildlife disease objective, as well as those that will address habitat degradation by decreasing densities, Alternative Six is the best option for the NPS and NER, and the one that also best meets the guiding management and legal directives.	**22-39.** Thank you for your comment.
22-40	JHCA offers the following additional comments on its position supporting a modified version of Alternative Six, given that biological truths must still be implemented in political and socio-economic realities. We recognize that winter feeding keeps bison and elk numbers high (far above ecological carrying capacity), which is viewed as a boon to sportsmen and many in the local recreation-tourist driven economy. Artificial/supplemental feeding is also a management tool to reduce conflict – concentrated bison and elk are less likely to roam onto private property and 9	**22-40.** See response 22-26 regarding changes made to Alternative 4 (the Preferred Alternative) in the Final Plan/EIS.

Comment No.	Letter 22 (cont.)	Response
22-40 (cont.)	livestock ranches in search of food. Neither of these realities, however, supports managing in the short-term for unnaturally high bison and elk numbers at the expense of the long-term vitality of native habitat and Jackson bison and elk populations. These realities must be taken into account, and therefore, JHCA recommends a gradual, controlled phaseout of feeding. We further advocate for an aggressive monitoring program be established to help determine start and end feeding dates during 5-year phaseout as well as any significant effects on wildlife numbers and impacts to private property and ranchlands. Monitoring results should be used by agencies to make necessary changes in the phaseout program.	
22-41	In addition, a phaseout of feeding needs to be gradual, carefully monitored and done in a cooperative fashion with key stakeholders such as ranchers and private landowners to address their concerns. We advocate that the agencies in cooperation with county and town officials, develop a working group to bring together the necessary stakeholders to make a phaseout of feeding feasible. Membership should include ranchers, homeowner associations, community leaders, agency officials, local businesses, hunters and conservation groups.	**22-41.** See response 22-26 on changes to Alternative 4 (the Preferred Alternative) in the Final Plan/EIS. It includes providing staff or other financial assistance to minimize landowner conflicts on adjacent lands.
22-42	As further mitigation options, fencing at no cost to private property owners, paying damage claims and elk hazing may be necessary tools to address these issues. It is important to remember that we are talking here about a difficult *transition* period. When that period ends and we have reached a situation over time with no reliance on supplemental feed, these conflict situations will be less and less. We must admit upfront that ending reliance on supplemental feed may very well cause problems and heartache; however, we must also remember that these will be mostly temporary and that they are necessary for the long-term health of our wildlife. When looking at the very real threats and potentially disastrous impacts from chronic wasting and other diseases, these short-term sacrifices are small in comparison.	**22-42.** See response 22-26 on changes to Alternative 4 (the Preferred Alternative) in the Final Plan/EIS and response 22-41 with respect to providing assistance to the Wyoming Game and Fish Department.
22-43	We also recommend that programs aimed at improving and enhancing available winter range be continued, in order to ensure significant and healthy populations, and to reduce concentration with a return to naturally occurring migration. In addition, JHCA advocates for the Elk Refuge to implement a sprinkler irrigation system for cultivated crops during phaseout years as a mechanism to provide forage during the phaseout transition and to help "hold" elk on public lands as they transition to natural migrations. We believe that this human manipulation for the duration of the 5-year phaseout is necessary to achieve the long-term management objectives and to make the transition period run more smoothly. At the end of the transition period, we recommend that NER officials evaluate on an annual basis the need for irrigation. We recommend that agricultural farmlands in Teton Park be retired in order to restore to native vegetation.	**22-43.** See response 22-26 on changes to Alternative 4 (the Preferred Alternative) in the Final Plan/EIS with respect to supplemental feeding. The agencies agree that irrigation is an important management tool to achieve long-term objectives. The Preferred Alternative would initiate habitat restoration strategies in Grand Teton National Park, as identified in the Draft Plan/EIS, to achieve desired conditions.
22-44	Finally, JHCA supports the role of hunting of both bison and elk, recognizing the strong economic, cultural, and recreational values of this activity and the role hunting plays in controlling population numbers. During the initial years of the phaseout, we recommend higher hunt harvests as appropriate to more quickly arrive at targeted population sizes; otherwise, these unnaturally high populations will frustrate the purposes and the ultimate success of the phaseout. The elk hunt area in Grand Teton National Park should be maintained at current levels and hunting seasons and harvest in the region should be determined according to accepted practices of big game wildlife management.[3]	**22-44.** Thank you for your comment. See response 22-16 with respect to the DeLong reference in the footnote. The Preferred Alternative in the Final Plan/EIS would adopt an adaptive management approach to control population numbers and achieve desired conditions. The elk hunt on the refuge and the herd reduction program in the park would continue, and a bison hunt would be initiated on the National Elk Refuge.

[3] JHCA also adopts and incorporates by reference the following documents: Don DeLong, *Description of the Basis of the Organization of the Bison and Elk Management Planning Document for the National Elk Refuge and Grand Teton*

Comment No.	Letter 22 (cont.)	Response
	Conclusion	
22-45	The U.S. Fish and Wildlife Service and the National Park Service both recognize that the best available science requires management policies for the Jackson bison and elk herds that are aimed at reducing the existing population densities that are unnaturally high. Both agencies also recognize and admit that winter feeding is the key culprit in maintaining high densities and that these densities cause significant habitat degradation and increase the risk of disease transmission. Legally, NER directives make it quite clear that continuing winter feeding runs counter to the main conservation priorities for the refuge. In addition, as the attached documents illustrate, the NER has taken a position that implementing either Alternative Four or Five would run counter to clear legal mandates.	**22-45.** See response 22-16 on earlier versions of the Draft Plan/EIS (attached documents). See response 22-26 with respect to changes made to Alternative 4 in the Final Plan/EIS.
22-46	JHCA implores the agencies to adopt Alternative Six, with the added features herein, and not only because it meets sound wildlife management practices based on the best biological information and that the law mandates this outcome. In addition, winter feeding should be carefully phased out in five years because it is simply the right thing to do. Tough choices are ahead, but just because there will be some adjustment pains in the interim does not mean that we can avoid making these decisions. Protecting wildlife habitat within the Refuge and National Park and the long-term health and vitality of the Jackson bison and elk herds depend on the agencies implementing a management change that directly addresses the identified problems. In the end, making these tough decisions based on sound science is what truly counts, not trying to treat this as a popularity contest or finding a management option that "splits the difference" as a political compromise, such as Alternative Four. Alternative Six as modified is what gets us to long-term protections against existing and incoming diseases, and is the only alternative that is consistent with the management plan's primary goals and the legal mandates for conservation priorities on the National Elk Refuge and Grand Teton National Park. We thank you for the opportunity to comment. Sincerely, Tom Darin, Public Lands Director and Staff Attorney (also on behalf of Defenders of Wildlife) Franz Camenzind, Ph.D Executive Director	**22-46.** See response 22-26 with respect to changes made to Alternative 4, the Preferred Alternative, in the Final Plan/EIS. Thank you for your comments.

National Park (July 2004) (Exhibit 5); Don DeLong and Joanna Behrens, *Additional Details on Strategies and Techniques* (Jan. 2005) (Exhibit 6); Don DeLong, *Wildlife Management Principles Applicable to the Bison and Elk Management Planning Process for the National Elk Refuge and Grand Teton National Park* (Dec. 2004) (Exhibit 7); Don DeLong, *Problem Definition Summary Report* (May 2002) (Exhibit 8); Don DeLong, *How Alternative Management Plans Address the Core Problem* (July 2004) (Exhibit 9); and Don DeLong, *Factors Considered in Developing Alternative Management Plans, and their Relative Importance in the Bison and Elk Management Planning Document for the National Elk Refuge and Grand Teton National Park* (Aug. 2004) (Exhibit 10).

11

Comment No.	Letter 23	Response
	National Parks Conservation Association® *Protecting Parks for Future Generations*© November 5, 2005 Bison and Elk MP/EIS Laurie Shannon, Project Manager National Elk Refuge PO Box 510 Jackson, WY 83001 *Subject: Draft Bison and Elk Management Plan and EIS* Dear Project Manager Shannon,	
23-1	Thank you for the opportunity to comment on the Draft Bison and Elk Management Plan and Environmental Impact Statement (DEIS). The National Parks Conservation Association (NPCA) has reviewed the DEIS, and is pleased to submit the following comments.	**23-1.** Thank you for your comment.
23-2	NPCA recommends that Alternative 6, with the additional enhancements as described below, be selected as the final decision. NPCA believes Alternative 6, the environmentally preferred alternative, best meets the many and varied needs and challenges of bison and elk management in the National Elk Refuge and Grand Teton National Park. Alternative 6 is the best decision to protect the long-term health of wildlife in Grand Teton National Park (GRTE) and the National Elk Refuge (NER) and best meets the legal and policy mandates of the two agencies.	**23-2.** Thank you for your comment.
23-3	If current management practices continue, or if similar feeding intensive alternatives similar to Alternative 5 were selected, the potential spread of disease among wildlife populations in the region could reach epidemic proportions, threatening not only world-class wildlife populations but also local outfitting and ranching operations. The proposed management action, Alternative 4, is an unworkable compromise because it will not solve long-term disease threats to wildlife, such as brucellosis, or the potential for Chronic Wasting Disease (CWD), tuberculosis, and other wildlife diseases.	**23-3.** The agencies modified Alternative 4 in the Final Plan/EIS to clarify the desired conditions for this planning process and to emphasize adaptive management and collaboration with others. The alternative does not identify a timeframe for phasing out feeding or the number of years that feeding would occur. Existing trends, new research findings, and other changing conditions would provide the basis for developing a dynamic framework for decreasing the use of supplemental feeding on the refuge. The framework would be developed in collaboration with the Wyoming Game and Fish Department to identify the steps and criteria required for achieving desired conditions and goals. Population management, vegetation restoration, ongoing monitoring, and public education would be integral components of this framework. The agencies believe that it will take a flexible approach to solve the long-term disease threats to wildlife in the Jackson bison and elk herds.
23-4	One of the key issues identified in the DEIS is that the National Elk Refuge winter feedgrounds pack large elk and bison populations artificially close, and as a result winter feeding regimes harbor the highest degree of threat for outbreaks of diseases, which would impair the wildlife resources. Science shows that free-ranging elk and bison on native ranges are healthier and less susceptible to disease outbreaks.	**23-4.** Thank you for your comment.
23-5	Although changes to the existing conditions are necessary for the future health of bison and elk, NPCA would like to recognize and thank past generations of citizens and managers, and all those who have worked together over many decades to protect the Jackson Elk herd and reestablish the	**23-5.** Thank you for your comment.
	National Parks Conservation Association **P.O. Box 1173** **Jackson, WY 83001** **Phone 307-733-4680**	

Comment No.	Letter 23 (cont.)	Response
23-5 (cont.)	Jackson Bison herd in the face of significant pressures on the natural landscape. The proposed management changes are part of this long history of care for healthy wildlife on the National Elk Refuge and in Grand Teton National Park.	
23-6	The National Parks and Conservation Association specific comments and recommendations on adopting an enhanced Alternative 6 in the final Plan decision follow.	**23-6.** Thank you for your comment.
	Purpose and Need	
23-7	Support for selection of Alternative 6 is contained in the analysis of the legal obligations, issues related to high elk/bison concentrations and effects on habitat, to take advantage of actions that are feasible by the decision-making agencies, and actions that can be taken in collaboration with other stakeholders.	**23-7.** Thank you for your comment.
23-8	NPCA has significant concerns with the implications of the issues related to feeding and high ungulate concentrations. Simply put, the USFWS and NPS are currently not meeting refuge and park purposes, agency missions, and related legal responsibilities, and the decision must bring management back into compliance with these mandates. Directly related to the feeding regime is the damage to habitat due to excessive browsing by high concentrations of ungulates, and the unnaturally low winter mortality, which affects other species also required to be protected on the refuge and in the park. NPCA is further concerned with the increased risk feeding creates of potentially major outbreaks of exotic diseases, and the existing high level of brucellosis in the elk and bison herds wintering on NER feedgrounds.	**23-8.** See response 23-12 with respect to the agencies' legal mandates.
23-9	There is no question that the feeding program on the Refuge has resulted in unnaturally large concentrations of elk, which over many decades is a primary contributor to habitat alteration and loss. Feeding also changes natural winter mortality rates of bison and elk, and necessitates a more intense elk reduction program in the national park. The high levels of the disease brucellosis in elk and bison negatively impact wildlife, and the loss of Wyoming's brucellosis free status in 2004 is of significant concern to the state and livestock industry.	**23-9.** Thank you for your comment.
23-10	The DEIS correctly states "All of the biological issues identified above stem from the winter feeding program on the National Elk Refuge." (DEIS p. 10).	**23-10.** Thank you for your comment.
23-11	Therefore, NPCA believes Alternative 6 best meets the legal responsibilities of the two agencies with respect to bison and elk conservation and management, which include consistency with wildlife management principles and the best available scientific information.	**23-11.** Thank you for your comment.
	Factors considered in developing the plan – Legal and Policy Directives	
	Legal Considerations	
23-12	NPCA is concerned that about several potential legal deficiencies should the proposed action be selected in the final EIS as the final alternative. NPCA requests a thorough analysis and disclosure of the U.S. Fish and Wildlife Service and National Park Service's legal obligations in	**23-12.** 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). The agencies described the impacts and shortcomings associated with each alternative, including the proposed action. Within the legal mandates of both agencies, there is latitude to make decisions based on sound professional judgment and other factors. The agencies believe that all the alternatives proposed in the Draft EIS are reasonable alternatives that would meet the purposes of the National Elk Refuge and Grand Teton National Park and that they comply with the National Environmental Policy Act.

Comment No.	Letter 23 (cont.)	Response
23-12 (cont.)	the final proposed alternative. As it now stands, NPCA hopes to raise our concerns about the ability of preferred alternative 4 to pass legal mandates. The final alternative must be amended to assure that these laws and policies are met. **National Park Service Legal obligations:**	**23-12 (cont.).** Given the 90+ year history of supplemental feeding on the National Elk Refuge, the divergent stakeholder views, and the social, economic, and political issues involved, taking action to address the complex issues as described in the Preferred Alternative in the Final Plan/EIS is reasonable and would meet the legal mandates. The legal directives were identified in the Draft Plan/EIS (pp. 11–16). 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 <www.nps.gov/applications/npspolicy/index.cfm>.
23-13	*A. Preservation of natural components and processes of ecosystems in natural condition.* Grand Teton National Park is required to preserve natural components and processes of ecosystems in natural condition to the greatest extent possible, including natural change over time. (16 USC 1.NPS 2000:4.1).	**23-13.** See response 23-12 regarding legal mandates.
23-14	Preferred alternative 4 fails to meet this standard by continuing an artificial feeding regime that significantly alters seasonal ungulate migration and daily wildlife movements. Maintaining an artificial feeding program fails GRTE's duty to preserve the critical ecosystem process of wildlife migration, and certainly does not meet the test of an agency's attempt to meet this standard to "the greatest extent possible."	**23-14.** See response 23-12. Under Alternative 4 as described in the Draft Plan/EIS, wildlife movements and seasonal migration would continue on an ecosystem level, much as they have in the past.
23-15	*B. Maintaining natural population fluctuations and processes* Grand Teton National Park is required to adopt resource preservation and management strategies for native species that are intended to maintain natural population fluctuations and processes that influence the dynamics of individual animal populations, groups of animal populations, and migratory populations in parks (NPS 2000:4.4.1.1).	**23-15.** See responses 23-12 and 23-16.
23-16	The agency is required to sustain natural abundance, diversity, dynamics and behaviors of native wildlife. By maintaining a system of artificial feeding, the GRTE's elk are maintained at an artificially high level, and the NPS is not providing for the natural population fluctuations that would occur normally under a no supplemental feeding regime. In addition to addressing this issue in the FEIS, NPCA also requests an analysis to understand how the likely introduction of Chronic Wasting Disease and other virulent diseases into the park's elk population would square with this legal requirement. By making a conscious decision to maintain feeding, NPS is knowingly putting its wildlife population in jeopardy, and thereby seemingly opening itself up to an inability to comply with this legal requirement.	**23-16.** The historic levels of elk summering in Grand Teton National Park were likely much higher than current population levels. It is the lack of winter range that has resulted in many of the issues addressed in this planning process (Draft Plan/EIS, pp. 10, 118–21). The Wyoming Game and Fish Commission sets population objectives for the Jackson elk herd through a public process. The agencies work cooperatively with the Wyoming Game and Fish Department to manage the Jackson elk herd (also see responses 23-29 and 23-42).
23-17	*C. Assuring against impairment of park resources* A primary responsibility of GRTE is to ensure that park resources and values do not become impaired (16 USC 1, 16 USC 1a-1, NPS 2000:1.4.4.)	**23-17, 23-18.** None of the actions proposed in the alternatives are expected to impair park resources. See response 23-42 regarding elk resources. A determination for impairment was included in the impact analysis section for all impact topics relating to the resources and values of Grand Teton National Park and the John D. Rockefeller, Jr., Memorial Parkway (see Draft Plan/EIS, p. 188).
23-18	NPCA is very concerned that the Proposed Action Alternative 4 may fail to assure that valuable park resources do not become impaired. Please assure that the park's plant and wildlife resources will not become impaired under the final alternative in the FEIS.	
23-19	*D. Artificial Manipulation of Habitat* NPS 2000:4.4.3 states: "Habitat manipulation for harvested species [e.g., elk] may include the restoration of a disturbed area to its natural condition so it can become self-perpetuating, but will not include the artificial manipulation of habitat to increase the numbers of a harvested species above its natural range in population levels."	**23-19.** The Draft Plan/EIS did not propose artificial manipulation of habitat within Grand Teton National Park to increase numbers of harvested elk. In Alternatives 2 through 6 the National Park Service would restore former agriculture land (about 4,500 acres) for the purposes of providing native forage. The alternatives proposed in the Draft EIS are consistent with NPS policies and with Grand Teton National Park's mission and purposes. Also see response 23-12.
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Comment No.	Letter 23 (cont.)	Response
23-19 (cont.)	NPCA is concerned that by allowing artificial manipulation of habitat in its Proposed Action alternative to keep elk numbers artificially high, the alternative may fail to assure compliance with this NPS requirement. The FEIS must satisfactorily address this issue.	
23-20	*E. Assuring genetic variability* GRTE is also required to maintain genetic variability of its wildlife (NPS 2000:4.4.1.2). Please assure that the preferred alternative does not fail to meet this test as it applies to maintaining a genetically viable bison population over time. NPCA is concerned that final population targets for bison may be maintained too close to the minimum viable population size, which could result in a catastrophic crash in the bison population should a major environmental disturbance, such as disease outbreak, enter the herd.	**23-20.** Maintaining a bison herd size of 450–500 animals, as identified in Alternative 4 in the Draft Plan/EIS, would be above what is believed to be the minimum number needed for a herd to maintain genetic heterozygosity. In the Final Plan/EIS the agencies recommend a population of approximately 500. Given the complex environmental and social issues with respect to this planning process, the agencies believe that the recommended objective is reasonable. The recommended bison objective for Alternative 6 in the Final EIS was also modified to be consistent with Alternative 4 at approximately 500 animals.
23-21	*F. Ensure management is consistent with scientific information* NPS is required that its management of park resources is consistent with scientific information and wildlife management principles (NPS 2000:2.1.2, 4.1.1). The public record on the likely introduction of wildlife disease as a result of continuation of artificial feeding has been made clear by a long list of wildlife experts. Many wildlife researchers have submitted scientific information to support that claim. Indeed, the agencies themselves admit that the herds are going to be continually exposed to risk as long as the feedgrounds are kept open. Therefore, NPCA would like to gain an understanding in the FEIS as to how NPS hopes to assure its management is consistent with available scientific information should it decide to proceed with an artificial feeding regime such as Alternative 4 or 5 for example, as compared with Alternative 6.	**23-21.** See responses 23-3 and 23-12 regarding the Preferred Alternative in the Final Plan/EIS and NPS legal mandates.
23-22	*G. Impacts on Yellowstone National Park Management* NPCA is concerned that, because a portion of Yellowstone National Park's elk population migrate into the area of focus here, elk populations in Yellowstone could be profoundly affected by this decision. Please assure that the FEIS conducts a thorough analysis of Yellowstone's legal obligations and its ability to comply with them (especially those outlined above) as they relate to a selected alternative. This analysis is especially important as it relates to any alternative that continues artificial feeding. This will potentially result in the introduction of CWD or another disease into Yellowstone's elk population, with the devastating effects then being transported to our nation's first national park. Please assure that GRTE is complying with its legal duty to work with Yellowstone in order to assure conservation of this migratory herd, as required under NPS 2000:1.5, 4.4.1.1.	**23-22.** Yellowstone National Park managers were briefed on the Draft Plan/EIS and were offered opportunities to comment. The two parks keep in contact concerning issues of mutual interest (including wildlife disease concerns) and will continue to do so.
23-23	**NEPA Compliance** *A. Adequate Analysis of Cumulative Effects* NEPA requires a thorough analysis of the connected and cumulative actions associated with the proposed alternative, at the point of implementation and into the reasonable foreseeable future. As continued artificial feeding has a high likelihood of facilitating the introduction and intensity of devastating disease into the elk and bison populations, NPCA is concerned that the cumulative effects analysis in the DEIS was not adequate. NPCA requests that the FEIS assure NEPA's cumulative effects analysis requirement are satisfied.	**23-23.** The commenter did not clarify what cumulative actions with respect to diseases were not analyzed. The agencies carefully considered all the direct and indirect impacts of continuing supplemental feeding under the various alternative scenarios, with lengthy discussions about diseases and the implications for the spread of diseases. In addition, all reasonably foreseeable activities for which there could be additional cumulative effects were identified and analyzed. At this time, there are no known foreseeable actions being proposed by any agency that would result in other cumulative effects. The fact that a disease such as chronic wasting disease could be introduced into the herd is not a reasonably foreseeable action being proposed by anyone.

Comment No.	Letter 23 (cont.)	Response
23-24	*B. Use of Best Available Science* NEPA also requires that all Federal agencies assure that the best available science is used to guide it management decisions. NPCA is concerned that the current preferred alternative fails to use and apply the best available science when it comes to addressing the spread of wildlife disease throughout a population. Please assure in the FEIS that the agencies are using and applying the best available science in its final decision.	**23-24.** See response 23-3 regarding the Preferred Alternative in the Final Plan/EIS. The agencies have used the best available science to guide decisions and to fully analyze the impacts of the alternatives.
23-25	**Compliance with U.S. Fish and Wildlife Service Policies and Directives** *A. Assuring policies don't exacerbate disease problems* U.S. Fish and Wildlife Service policies call for wildlife densities to not be sustained at levels that would result in habitat damage and that would exacerbate disease problems (USFWS 2001:601 FW 3.14.E). It appears that the Proposed Action alternative would only serve to exacerbate disease problems, and potentially introduce new ones, by continuing artificial feeding. Please assure that the agencies are complying with their own policy by not exacerbating wildlife disease problems.	**23-25.** The agencies believe that the Preferred Alternative in the Final Plan/EIS complies with legal mandates and would address disease concerns through a collaborative approach for the complex and difficult social issues related to the management of the bison and elk herds. Also see response 23-3.
23-26	**Compliance with Legal Requirements of the National Refuge System.** *A. Providing for all the refuge's wildlife community* 16 USC 668 dd(a)(2) and (a)(4)(A) require the National Elk Refuge to maintain habitat conditions that provide for the needs of all the refuge's wildlife community. In the Proposed Action alternative, NPCA believes that the USFWS is failing to provide for the rest of the refuge's wildlife community, and that the long-term vitality of these wildlife species is being compromised through a wrong-headed policy of continuation of unnaturally high elk levels. Please assure that the needs of the refuge's other species, such as mule deer, moose and bighorn sheep, are provided for in the final selected alternative.	**23-26.** The Preferred Alternative, as modified in the Final Plan/EIS (see response 23-3), would reduce the Jackson elk herd in cooperation with the Wyoming Game and Fish Department to meet the state's herd objective. Other wildlife species would benefit through the protection of woody vegetation in exclosures. The Draft and Final EISs acknowledge that exclosures could increase competition for habitat in some areas for other ungulates. Deer, moose, and bighorn sheep populations have been declining in Jackson Hole for unknown reasons, and more research needs to determine the causes.
23-27	*B. Wildlife densities and disease* National Refuges are required to not allow wildlife number to get so high that they cause habitat and disease problems. It appears that by maintaining a system of artificial feeding, the National Elk Refuge is doing just that. Please assure that the NER is taking appropriate action so as not to cause disease problems in its wildlife populations in the final alternative.	**23-27.** See responses 23-3 and 23-25 regarding modifications to the Preferred Alternative in the Final Plan/EIS.
23-28	***NPCA Position on Key DEIS Issues*** NPCA has developed its position and recommendations supporting Alternative 6 through the consideration of a suite of issues analyzed in the DEIS. NPCA supports:	**23-28.** Thank you for your comment.
23-29	**Healthy Bison and Elk Populations and their ecology:** • Actions that will best lead to the long-term health of the bison and elk herds in Grand Teton National Park and the National Elk Refuge. This is called for in the NPS 2001 Management Policies 4.1 and related sections, and protection of wildlife resources "unimpaired for future generations" are part of the foundational elements of Grand Teton National Park and the NPS enabling legislation.	**23-29.** Thank you for your comment. The agencies believe that the Preferred Alternative as modified in the Final Plan/EIS (see response 23-3) conforms to the agencies' management policies (see response 23-12) and would protect wildlife resources.
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Comment No.	Letter 23 (cont.)	Response
23-29 (cont.)	• Bison and elk hunting on the NER, and elk reduction program in GRTE should continue as appropriate management tools as needed to meet GRTE and NER wildlife goals and protect and enhance habitat. • Natural predator-prey systems including wolves and bears to help maintain natural population fluctuations and processes. • Bison numbers should not be managed at bare minimum numbers that could leave them vulnerable in the future. NPCA recommends that the bison herd size should be managed to a herd objective of approximately 500 bison. This modest increase in the bison herd size over Alternative 6 is recommended to provide additional protection to maintain genetic diversity and health of Jackson Hole's bison herd.	**23-29 (cont.).** In the Final Plan/EIS the agencies recommend a minimum population objective of approximately 500 bison to maintain genetic diversity in the herd. Ultimately, the Wyoming Game and Fish Commission sets population objectives following public review.
23-30	**Restoration of Habitat and Management of other Wildlife Species:** • Habitat is critical for bison and elk conservation, and healthy habitat, especially winter range should be maintained and enhanced to the greatest degree possible. • The decision should reflect a high priority to the restoration of habitat on winter range within the jurisdictional planning area of NER and GRTE. • The decision should also place a high priority to the restoration of habitat on winter range and the restoration of traditional migration routes on lands outside the NER and GRTE, and the NER and GRTE should commit to long-term collaborative partnerships with adjacent public land jurisdictions and private property owners as collective owners of the problems and challenges of the future healthy management of the Jackson Elk and Bison herds. • Enhance the irrigation on the NER to more efficiently utilize water resources, and to mitigate the loss of historic southern Jackson Hole winter habitat permanently impacted by development in the Town of Jackson and private lands in Teton County. • While recognized to be an issue outside this DEIS decision process, GRTE should continue to support the multi-decade trend of reduced cattle grazing in GRTE, to further support the habitat goals in the Bison and Elk plan.	**23-30.** See response 23-26 on protecting woody vegetation. The Preferred Alternative in the Final Plan/EIS (see response 23-3) does reflect a high priority for restoring former agricultural lands within Grand Teton National Park and for improving native vegetation on the National Elk Refuge as well as in the park units. Further, it emphasizes a collaborative partnership with the Wyoming Game and Fish Department and others to address many complex issues related to bison and elk management. Under Alternatives 2 and 3 it is believed that migrations to lands outside the National Elk Refuge and Grand Teton National Park could occur, and the agencies would actively support others in their efforts to restore migration routes. The Wyoming Game and Fish Department has responsibility for managing the state wildlife populations and is currently opposed to allowing migration into other areas.
23-31	**Phase Out Winter Feeding of Bison and Elk:** • Begin a phase out feeding of big game in the shortest possible timeframe, and phase out feeding completely in 5 years or less. • The Jackson Hole Elk Herd and Bison herd objective numbers should be adjusted or redistributed through hunting and habitat enhancements combined with natural selective processes. Herd objectives should be evaluated in collaboration with WGFD.	**23-31.** See response 23-3 regarding changes to the Preferred Alternative and collaboration with the Wyoming Game and Fish Department.
23-32	**Disease Prevalence and Transmission:** • Elimination of feeding would significantly reduce the prevalence of brucellosis in Elk wintering on the NER and in GRTE. • Chronic Wasting Disease, Bovine tuberculosis, and bovine paratuberculosis are not present, but are of significant concern, and pose the serious risk of impairment of wildlife resources and values in Grand Teton National Park. • Impairment of wildlife runs contrary to fundamental national park purpose, under the 1916 Organic Act, the NPS is charged with stewardship of parks "…To conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the Draft Bison and Elk Management Plan and EIS – NPCA Comments Page 6 of 11	**23-32.** Thank you for your comment.

Comment No.	Letter 23 (cont.)	Response
23-32 (cont.)	enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations." • Research more effective vaccines, and develop an effective field test for actual brucellosis infection, not just the current practice of testing for antibodies, since many false positives result from this currently ineffective test. • Vaccines for protection against brucellosis should be administered to big game in the National Elk Refuge only when an effective and non-intrusive vaccine against brucellosis is developed.	
23-33	**Recreational Opportunities:** • NPCA supports appropriate wildlife viewing and interpretive education programs continuing on the NER and GRTE. • As wildlife transitions to native winter range, wildlife viewing opportunities will also need to adjust. New interpretive and educational programs should be devised to adjust to the natural movements of wildlife and continue to serve visitors interests in viewing wildlife and opportunities to learn about wildlife. The NER and GRTE should help meet the public's wildlife viewing needs, especially during the winter season. • Hunting opportunities for bison and elk on the NER and the elk reduction program in GRTE should continue as may be needed and appropriate in the proper management of the bison and elk herds.	**23-33.** The agencies are committed to working cooperatively with local governments to ensure continued opportunities for compatible wildlife-dependent recreation. Future public uses for the National Elk Refuge will be addressed when the comprehensive conservation planning effort is undertaken following the completion of this planning effort.
23-34	**Cultural Opportunities and Western Traditions:** • Support for involvement of American Indian tribes in decisions regarding bison. • Support the trend of reduced cattle grazing in GRTE, especially in areas with potential for enhancement of winter range areas.	**23-34.** Thank you for your comment.
23-35	**Commercial Operations and the Local and Regional Economy:** • Wildlife viewing and appropriate hunting opportunities should continue. • Adjustments in wildlife viewing methods and interpretive opportunities such as Sleigh Rides may need to modify historic patterns to adapt to elimination of elk feeding.	**23-35.** Thank you for your comment.
23-36	**State Plans and other Agreements:** • The Bison and Elk Management Plan decision should include direction for the NER and GRTE to continue the on-going process of working with the Wyoming Game and Fish Department (WGFD) on issues of common interest, including herd objectives, hunting seasons and regulations, and habitat enhancement projects of mutual interest.	**23-36.** Thank you for your comment.
23-37	**Jackson Interagency Habitat Initiative:** • NPCA supports the interagency habitat initiative goals of protecting the long-term sustainability of native ungulates and their winter and transitional ranges in the Jackson Hole area.	**23-37.** Thank you for your comment.
23-38	***Management Goals*** NPCA concludes that Alternative 6 will best meet the Management Goals established in the DEIS: Draft Bison and Elk Management Plan and EIS – NPCA Comments Page 7 of 11	**23-38.** Thank you for your comment.

Comment No.	Letter 23 (cont.)	Response
23-38 (cont.)	**Goal 1. Habitat Conservation:** Provide secure, sustainable ungulate grazing habitat that is characterized primarily by native composition and structure within and among plant communities and that also provides for the needs of other native species. **Goal 2. Sustainable Populations** Contribute to elk and bison populations that are healthy and able to adapt to changing conditions in the environment and that are at reduced risk from the adverse effect of non-endemic diseases. **Goal 3. Numbers of Elk and Bison** Contribute to the WGFD herd objectives for the Jackson elk and bison herds to the extent compatible with Goals 1 and 2, and the legal directives governing the management of the National Elk Refuge, Grand Teton National Park, and John D. Rockefeller, Jr., Memorial Parkway. **Goal 4. Disease Management** Work cooperatively with the state of Wyoming and others to reduce the prevalence of brucellosis in the elk and bison populations in order to protect the economic interest and viability of the livestock industry, and reduce the risk of adverse effects for other non-endemic diseases not currently found in the Jackson elk and bison populations.	
23-39	***Environmental Consequences*** In NPCA's analysis of the long-term environmental consequences to the NER and GRTE strongly suggest that Alternative 6, the environmentally preferred alternative, be selected. This is proven in the conclusion sections of a number of the key impact topics, summarized below.	**23-39.** The environmentally preferred alternative will be designated in the Record of the Decision.
23-40	NPCA has additionally reviewed a document that appears to have been produced as an appendix for the draft Bison and Elk Management DEIS, but which was not fully included in the final DEIS. This document, titled Infectious Agents of Concern for the Jackson Hole Elk and Bison Herds: An Ecological Perspective, by Markus J. Peterson, dated 15 June, 2003, was prepared for the NER and GRTE. Because the disease issue is of major significance in the final decision to be made (DEIS Goal 2 and Goal 4), NPCA requests this document be included as part of NPCA's comments by this reference. Several noteworthy statements from this document are: "High elk densities associated with the National Elk Refuge and other Jackson Hole-area feedgrounds approximates those in captive elk herds where CWD prevalence was 20 to >90%. Elk density in Jackson Hole is far higher than that in free-roaming elk populations in the Colorado-Wyoming [CWD] endemic area. Thus if CWD somehow becomes established in the Jackson elk herd, one should expect an epidemic; these are probably nearly ideal conditions for a CWD epidemic in free-roaming elk populations. Moreover…one would then expect CWD to gradually spread throughout the GYA unless prompt and decisive management action was taken." (Peterson 2003)	**23-40.** The Peterson report was used and cited as a reference in the Draft Plan/EIS where appropriate (e.g., p. 585). Copies of the report are on file at the National Elk Refuge headquarters.

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23-40 (cont.)	"Preventing CWD from becoming established in the Jackson elk herd should be the first CWD-related priority for wildlife biologists, managers, and policy makers responsible for this population…There is no easy solution to this problem. First clinical signs of CWD are not diagnostic, there is no treatment, there is no prevention in the sense of vaccination in the face of an outbreak, and CWD is invariably fatal once clinical signs develop." (Peterson 2003) "…those tasked with managing the Jackson bison and elk populations should be keenly concerned about bovine tuberculosis. If one desired ideal circumstances for maintaining M. Bovis in a free-roaming elk population, they would have to go no further than the National Elk Refuge and other GYA feedgrounds…Clearly, preventing M. bovis introduction into the GYA is far more desirable than having to either live with, or eradicate it." (Peterson 2003) **Environmental Consequences - Impact Conclusions supporting Alternative 6 in the DEIS:**	
23-41	**Water Quality:** Lower levels of water pollution; "The reduction would be greatest under Alternative 6 because of phaseout of feeding and least under Alternative 5." **Cultivated Fields and Forage Production:** "Alternatives 4, 5, 6 would result in more palatable and higher quality forage produced…" and "Total forage production under Alternative 6 would be more…in the long term compared with Alternative 1." **Native Grasslands in GRTE:** Native grassland habitat in the park would increase by an estimated 4,500 acres in the short term…long term leaving approximately 2.250 acres more native grassland." And "In the park there would be 4,500 fewer acres of agricultural land in the long term. Plant species diversity would increase substantially on these lands." **Impacts on the Jackson Elk Herd:** Alternative 6 Conclusion, (DEIS page 304-305), states (emphasis added) **"The risk of a non-endemic disease quickly spreading through the population or having major adverse impacts to elk survival would be among the lowest of all the alternatives** because of eliminating contact associated with the feedlines, reduced numbers, and increased dispersion. The prevalence of brucellosis in the Jackson Elk Herd would be moderately lower than under Alternative 1." And **"Alternative 6…would result in higher levels of long-term health, sustainability, and naturalness in the Jackson Elk Herd than what would occur under Alternatives 3, 4, and 5." "Alternative 6…would have the lowest potential for impairment from disease."**	**23-41.** Thank you for your comment.
23-42	By stark comparison, the Alternative 5 (DEIS page 296) conclusion on impacts to the Jackson Elk herd implies the impairment of the elk herd is a distinct possibility: "The risk of non-endemic infectious disease spreading quickly through the elk population would be high Draft Bison and Elk Management Plan and EIS – NPCA Comments Page 9 of 11	**23-42.** As proposed, none of the actions in Alternative 4 or 5 would result in impairment to elk in Grand Teton or Yellowstone national parks (elk are not being impaired now). The agencies cannot prevent deer, elk, or moose in the primary analysis area from contracting a non-endemic disease (such as chronic wasting disease) from outside the herd unit and transporting it into the Jackson herd or prevent it from being introduced into Yellowstone National Park. The alternatives that would reduce herd densities through a reduction or phasing out of supplemental feeding on the National Elk Refuge during winter would reduce the risks of adverse impacts if the disease did become established (Draft Plan/EIS, p. 136). The alternatives were ranked based on a relative prevalence compared to the No-Action Alternative (Alternative 1). If chronic wasting disease did become established in the elk herd, it is likely that the prevalence would fall within the range of free-ranging elk (about 4%) and confined elk (potentially 59% or higher) (Draft EIS, p. 256).

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23-42 (cont.)	due to the near annual winter feeding program" and states "Barring the introduction of serious non-endemic disease, Alternative 5 would not impair the elk population in the park." The conclusion section on Alternative 4 has similar language. This highly qualified determination of "impairment" deserves greater development in the final EIS, and must also consider the potential impairment of Yellowstone National Park's wildlife resources. NPCA has significant concerns that impairment may result.	**23-42 (cont.).** Under all alternatives, when supplemental feeding is used actions would be taken as they are now to minimize the spread of diseases. Other than the ranking described in the impact analysis (Draft Plan/EIS, Table 4-6, p. 257), it would be difficult to quantify how park resources (elk) would be impaired. Since Yellowstone National Park does not feed elk, the risk to the Yellowstone herd would be expected to similar to what has been found in free-ranging populations, about 4%. Also see response 23-22.
23-43	**Impacts on the Jackson Bison Herd:** Similar to the Elk Herd impacts, **"Alternative 6 would result in higher levels of long-term health, sustainability, and naturalness in the Jackson Bison Herd than what would occur under Alternatives 3, 4, and 5."** and **"The risk of a non-endemic disease quickly spreading through the [bison] herd would be the lowest of any of the alternatives…"**	**23-43.** Thank you for your comment.
23-44	**Impacts on Other Wildlife:** Impacts of Alternative 6 on other wildlife, while not in every instance, would in summary be most beneficial to help achieve the responsibilities of the agencies for species in addition to bison and elk, such as mule deer and moose, small mammal diversity, neotropical birds, sage and blue grouse.	**23-44.** Thank you for your comment.
23-45	**Impacts on Human Health and Safety:** While it is somewhat comforting to know that "Current evidence does not suggest that chronic wasting disease causes infection in humans" (DEIS p. 433), the lack of evidence does not conclusively prove such transmission is impossible. NPCA has concerns over the potential of such disease transmission from bison and elk to humans, such as has occurred with brucellosis. Again, Alternative 6 is the best alternative from the standpoint of human health and safety, (DEIS p. 444), "The potential risk of disease transmission to humans would be lower under Alternative 6 compared to all alternatives…due to the elimination of winter feeding concentrations and fewer elk and bison." More epidemiologic and laboratory studies would be helpful to monitor the potential for CWD transmission to humans.	**23-45.** There is no scientific evidence to suggest that chronic wasting disease can infect humans. To be safe, the Centers for Disease Control and Prevention recommend that hunters in a number of states do not consume meat from an animal that appears sick or that tests positive for the disease. Bison cannot contract chronic wasting disease and could not potentially transmit the disease.
23-46	**Impacts on Recreational Opportunities:** While the number of people participating in sleigh rides could decline, and wildlife viewing opportunities would become more variable, new opportunities would also be created under Alternative 6, such as wildlife viewing in the Blacktail Butte and Kelly hayfields. Elk hunting opportunities would decline on the NER and GRTE, but would be somewhat offset by opportunities in the Jackson herd unit. Bison hunting opportunities would increase. In total, based on the available information, NPCA believes the changes in bison and elk management would not measurably affect visitation, and thus would have a negligible impact on overall recreational opportunities in the Jackson Hole area.	**23-46.** Thank you for your comment.
23-47	**Impacts on Livestock Operations:** Alternative 6 would reduce the risk of brucellosis being transmitted from elk and bison to livestock more than the other alternatives, a beneficial impact. An adverse impact of Alt. 6 is it could increase impacts on private property. The NER and GRTE must be prepared to participate in collaborative multi-jurisdictional solutions to address this issue. In the long-	**23-47.** The agencies are committed to working with landowners to minimize conflicts. Alternative 4 in the Final Plan/EIS (the Preferred Alternative) has been modified to include mitigation for working with adjacent landowners. As stated in the Draft Plan/EIS (p. 38), the agencies would continue to participate in the Jackson Hole Elk Studies Group and the Greater Yellowstone Interagency Brucellosis Committee, regardless of which alternative is implemented.

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23-47 (cont.)	term as habitat was enhanced and the bison and elk herds stabilized at more natural and sustainable levels, these issues would be reduced.	
23-48	***Conclusion:*** Healthy, diverse wildlife populations depend on healthy habitat, and both are among our greatest ecological and economic assets and are an investment in our region's future. Grand Teton and Yellowstone National Parks have been set aside to protect the resources and to leave them unimpaired for future generations. Alternative 6 best addresses the purpose and need for the Bison and Elk Management Plan.	**23-48.** See response 23-3. The Preferred Alternative in the Final Plan/EIS has been modified to include an emphasis on adaptive management actions based on a structured framework, criteria, and monitoring.
23-49	Changes in management on the NER and GRTE with Alternative 6 are significant, and will require careful transition, hard work, and collaboration among agencies and stakeholders. Implementation will require additional investment of NER and GRTE time and resources to help complete the necessary adjustments. While implementing Alternative 6 presents challenges, the consequences of the Proposed Action Alternative 4, or even worse for Alternative 5, are much more dire, and pose the risk of impairment of the resources in the future.	**23-49.** Thank you for your comment.
23-50	With the habitat enhancements included in the DEIS, and the additional potential for habitat enhancements in the surrounding area, there is enough winter range to support health herds in the range of the Jackson herd objective. Yet the proposed management plan continues feeding too long, and threatens these vital ecological, cultural and economic resources. The potential of massive disease spreading throughout the region, starting at the feedgrounds, undeniably threatens the viability of Greater Yellowstone's wildlife into the future, and must be taken into account in the final decision. Thank you for the opportunity to provide these recommendations. Sincerely, /s/ /s/ Tim Young, Associate Regional Director Tony Jewett, Senior Regional Director Tim Stevens, Program Manger RECEIVED NOV - 7 2005 NER & GTNP ELK & BISON PLANNING OFFICE Draft Bison and Elk Management Plan and EIS – NPCA Comments Page 11 of 11	**23-50.** Thank you for your comments.

Comment No.	Letter 24	Response
24-1	NATIONAL WILDLIFE FEDERATION® *People and Nature: Our Future Is in the Balance* Rocky Mountain Natural Resource Center www.nwf.org November 4, 2005 Bison and Elk MP/EIS Laurie Shannon, Project Manager National Elk Refuge P.O. Box 510 Jackson, WY 83001 Subject: Draft Bison and Elk Management Plan/Environmental Impact Statement Dear Ms. Shannon: The National Wildlife Federation respectfully submits the following comments on the *National Elk Refuge and Grand Teton National Park Draft Bison and Elk Management Plan and Environmental Impact Statement* prepared by the U.S. Fish & Wildlife Service (USFWS) and the National Park Service (NPS). As the nation's largest member-supported conservation education organization, the National Wildlife Federation (NWF) unites people from all walks of life to protect nature, wildlife, and the world we all share. NWF has educated and inspired families to uphold America's conservation tradition since 1936. Our common sense approach to environmental protection brings individuals, organizations, and governmental agencies together to ensure a brighter future for people and wildlife.	**24-1.** Thank you for your comments.
	The National Wildlife Federation has a long history of working on wildlife issues in the Greater Yellowstone Ecosystem. Throughout our involvement in the region, NWF has advocated for science driven decision-making and management of wildlife. This plan presents options for managing the Jackson bison and elk herd for the next 15 years. In particular, the plan attempts to address issues relating to high animal concentrations on the refuge during the winter months. NWF understands the concerns over this large concentration of elk and bison and agrees that improvements to management of these herds are needed.	
24-2	NWF fully appreciates the historical basis for development of feed grounds in northwestern Wyoming. Severe winter weather combined with human development on winter ranges and elk damage to stored livestock feed all led to the establishment of elk feed grounds in Wyoming. These feed grounds serve to unnaturally concentrate elk and have led to an increased prevalence of diseases, especially brucellosis. While brucellosis does not significantly affect elk and bison at the population levels, it is a major concern to livestock operators in the area because it can be transmitted from wildlife to cattle and thus disrupts the economic value of the state's cattle industry. Furthermore, *Brucella spp* is a federally regulated disease organism and has recently been designated as a "Select Agent" in the list of agents of bioterrorism by the Centers for	**24-2.** The U.S. Fish and Wildlife Service and the National Park Service believe that the best management action in the long term to ensure that the Animal and Plant Health Inspection Service would not have to implement the U.S. Animal Health Protection Act would be to reduce the prevalence of brucellosis by phasing out refuge supplemental feeding while working with the Wyoming Game and Fish Department to minimize wildlife conflicts with adjacent landowners.
	2260 Baseline Road, Suite 100, Boulder, CO 80302 Tel: 303-786-8001	

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24-2 (cont.)	Draft Bison and Elk EIS November 4, 2005 Page 2 Disease Control. Therefore, any opportunity for increased transmission of brucellosis from wildlife becomes a very contentious and volatile issue. Wyoming currently is classified as a "Class A" brucellosis state, a designation that severely constrains the marketability of its cattle. Management that facilitates fear of brucellosis transmission from wildlife to livestock does not assist conservation of wildlife. Additionally, the U.S. Animal Health Protection Act (USAHPA) may be used to justify draconian actions against wildlife under the pretense of protecting livestock health. The agencies must guard against management that would provide excuses for APHIS to implement the USAHPA.	
24-3	NWF did note a glaring error in the DEIS, the summary lists APHIS as an agency "responsible for managing elk and bison and their habitat in the Jackson Hole area." This statement is absolutely false and misleading. APHIS has no management authority over elk, bison or their habitat. We strongly suggest that you correct this error.	**24-3.** This error has been corrected.
	Having reviewed the plan we have several comments concerning the alternatives proposed for addressing management of these herds.	
24-4	**General** NWF supports the adoption of the preferred alternative, but with some modifications outlined below. Ultimately, it is in the best interest of wildlife to discontinue winter feeding, however, a strategic, methodical approach to reducing feeding is preferable than eliminating winter feeding too quickly. This is the principle reason we support Alternative 4. We also support the reduction of the bison population to approximately 400 animals and reduction of the elk population to meet Wyoming Game and Fish Department (WGFD) objectives. These reductions could come from a variety of sources including hunting, predation and winter loss. Hunting would provide the most focused removal method and provides recreational opportunities for the public. NWF strongly recommends that fair-chase hunting be emphasized by the agencies to achieve both bison and elk population goals.	**24-4.** Thank you for your comments.
24-5	NWF supports the reduction of supplemental feeding of elk and bison on the National Elk Refuge. The feeding program artificially concentrates these herds, which presents several management challenges. In particular, we are concerned that concentrating elk and bison could have major ramifications for managing wildlife diseases (e.g. brucellosis, bovine tuberculosis, chronic wasting disease, etc) within these populations and as possible vectors to domestic livestock. However, NWF is well aware of the passage of the U.S. Animal Health Protection Act and its potential negative impacts to wildlife and wildlife managers. Furthermore, we recognize any reduction in the use of supplemental feeding will result in management challenges both on and off the National Elk Refuge. Any final management decisions regarding winter feeding must incorporate the off-site impacts to other federal and private lands and not make elk or bison more vulnerable to draconian management by agricultural entities. It is critical that during implementation of your final alternative diligent monitoring of elk and bison distribution, population status, hunting success and vegetative condition occurs. We recommend that an adaptive management framework be built-in to the proposed action. Adaptive management would give field-level managers the tools needed to address issues that will arise during the transition away from supplemental feeding.	**24-5.** For the Final Plan/EIS, the agencies modified Alternative 4 and incorporated more emphasis on adaptive management.

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24-6	The preferred alternative prescribes feeding in above average winters and provides a mortality threshold prior to initiation of feeding. We suggest that vegetation availability along with winter severity may be better parameters to guide decisions on initiating feeding.	**24-6.** A mortality threshold would not trigger supplemental feeding under any alternative. Winter feeding would continue to be initiated after assessment of various factors, including growing season forage production, amount of forage offtake, temperature, snow levels, snow condition, and ungulate body condition and behavior.
24-7	**Off Site Impacts** NWF acknowledges the problems and conflicts that arise with winter feeding of wildlife, especially elk and bison. However, we understand that the Fish and Wildlife Service and the Wyoming Game and Fish Department did not start feeding elk just recently nor without reason and that certain elements of Wyoming's communities benefit from winter feeding of elk. Therefore we strongly encourage the analysis of off-site impacts in any proposal to end, phase out or scale back winter feeding on the National Elk Refuge. The livestock community would need to be involved because they will have to balance the impacts of elk depredation and the possibility of increased disease transmission. The Wyoming Game and Fish Department would bear the full brunt of landowner anger and wildlife damage claims. The winter tourism industry would be concerned about the reduction of elk viewing opportunities. Sport hunters, hikers and photographers would be concerned about decreased availability of elk in the area as they pursue their goals. These entities and others would be impacted by any change of the status quo and we strongly urge the management agencies to first acknowledge and then develop mechanisms to list, assess, verify and then mitigate these off site impacts.	**24-7.** Alternative 4 (the Preferred Alternative) in the Final Plan/EIS was changed to include a budget estimate for minimizing landowner conflicts and would emphasize that the agencies work with the Wyoming Game and Fish Department and landowners, including the local livestock community, to coordinate actions to prevent conflicts and to defray costs of managing potential conflicts. The Draft Plan/ EIS assessed potential impacts of the various alternatives on viewing and hunting opportunities and found that these opportunities would remain abundant because the Jackson elk herd would be managed at the state objective of 11,000 elk. The herd would likely be lower in some years under Alternatives 2, 3, and 6, with conservative low estimates of 8,100, 7,900, and 9,300, respectively.
24-8	The DEIS appears to recognize that off site impacts will occur when it discusses enhancing elk migration. Some of the alternatives describe efforts to re-establish migration routes for elk and bison to historic winter ranges. Re-establishment of migration to other wintering areas is seen by many as a way to reduce concentrations of elk and bison and also reduce likelihood of disease outbreaks. NWF fully recognizes that enhancing migration is not under the authority of either agency involved. Additionally, NWF is very aware of the current degradation of wildlife habitat occurring south of the refuge on public lands in the Upper Green River from development of natural gas. Any attempts to encourage ungulate migration beyond current wintering areas (feed grounds and native ranges) must include a complete analysis of the availability of new winter ranges to support additional animals and the impact to existing Wyoming feed grounds. There is no benefit to wildlife or people by adding additional migrating elk to winter ranges already at carrying capacity or to existing feed grounds. Status of potential winter ranges that could be occupied by elk migrating from feed grounds would have to be assessed, quantified and the potential for impacts to existing herds and land uses determined.	**24-8.** The Draft Plan/EIS discussed current conditions and direct and indirect effects of the alternatives that may occur in the secondary analysis area, which includes the Upper Green River lands. The Draft EIS also discussed known reasonably foreseeable activities that could result in cumulative effects. Currently, the Wyoming Game and Fish Department does not have plans to phase out feeding on state feedgrounds, nor does the agency support efforts to expand elk migration out of Jackson Hole. Providing additional analysis or broadening the scope of the EIS would be speculative and not necessary to meet the scope of actions covered in this planning process (Draft EIS, p. 31).
	Disease We note several instances in the DEIS where the possible impacts of chronic wasting disease (CWD) to the area's wildlife are described. NWF appreciates the high degree of concern by the agencies regarding possible occurrence of CWD in the area's wildlife and understands that large concentrations of elk may provide an opportunity for increased transmission among elk on feed grounds. We also acknowledge the science of CWD is a rapidly developing field of study and there are many aspects of the disease that are not clearly understood. However, we believe the DEIS unnecessarily inflates some aspects of concern regarding CWD. NWF and other organizations have worked hard to provide factual information to the public regarding possible transmission mechanisms, including transmission to humans. Unfortunately, the DEIS seems to	

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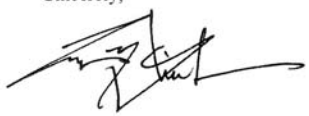
24-9	establish a connection between CWD and Bovine Spongiform Encephalopathy (BSE) and variant Kreutzfeld-Jacob in humans. It is imperative that this language be reviewed and modified to state the facts as they are currently supported by science. There is no evidence at this point in time that CWD is transmissible to cattle or to humans, nor is there any link between CWD and variant Kreutzfeld-Jacob disease. The possible occurrence of CWD in the area's wildlife is a significant concern, but that concern should not be over-stated.	**24-9.** Ongoing research is attempting to definitively determine whether chronic wasting disease could infect humans or cattle, but the Draft Plan/EIS acknowledged that there is no current evidence that it can infect humans (p. 433) or cattle (p. 490). The Draft EIS also noted that potential impacts on humans are discussed because of health concerns generated by similar diseases. Chronic wasting disease is a transmissible spongiform encephalopathy, thus in the same family of diseases as bovine spongiform encephalopathy, which has infected humans with variant Creutzfeldt-Jacob (vCJD) through consumption of infected meat. To be safe, while knowledge about chronic wasting disease continues to expand, states with infected deer and elk have recommended guidelines for safe handling and have advised hunters not to consume carcasses of animals that appear sick or those in which tests confirm CWD infection.
24-10	**Wildlife Vaccination** NWF conceptually supports the vaccination of wildlife where effective vaccines exist to assist in reducing disease transmission. NWF has long supported the Fish and Wildlife Service's use of canine distemper vaccines on black-footed ferrets (*Mustela nigripes*) and use of multiple vaccines on other predators, including wolves (*Canis lupus*). Unfortunately, some members of the public have begun to consider wildlife vaccination inappropriate to maintain the wildness of native wildlife. NWF strongly disagrees with this philosophy and advocates for maintaining a full menu of tools for wildlife managers to employ. Wildlife diseases, their direct and indirect impacts to wildlife and humans will become a more significant and more divisive issue in the future and we must maintain all tools for use with wildlife. To not include disease management tools in wildlife management will jeopardize the future of wildlife in this country.	**24-10.** Thank you for your comment.
24-11	NWF is aware data regarding efficacy of current brucellosis vaccines used in bison and elk is equivocal. However, we are also aware of some modeling exercises that indicate some reduction of brucellosis sero-prevalence is possible by using RB-51 in bison. The proposed action states that bison would not be vaccinated until a vaccine is developed that has a minimum efficacy rate of 50%. NWF requests that if and when this vaccine is developed and the USFWS and NPS seek to use the vaccine that you provide the public the opportunity to review and provide comments on your environmental analysis. However, we strongly urge the USFWS and NPS to consider the impact of vaccinating elk and bison on Wyoming's brucellosis status and the perspective of the livestock and disease regulatory community.	**24-11.** The Preferred Alternative in the Final Plan/EIS would allow WGFD personnel to use Strain 19 on elk and RB51 on calf and nonpregnant female bison along feedlines during feeding operations, but vaccinations would be phased out if logistics prevented effective deployment or when other more effective strategies are found. 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 to address state wildlife management activities, including vaccination, on the National Elk Refuge.
24-12	**Alternatives** NWF does not believe the environmental impact statement (EIS) explored a full-range of alternatives, including disease management (Goal 4). We do not understand why the plan states that none of the alternatives in the plan would change cattle grazing within Grand Teton National Park. You state one of the goals of this plan is to work with the State of Wyoming "to reduce the prevalence of brucellosis in elk and bison populations in order to protect the economic interest and viability of the livestock industry…" (Page ix). However, the plan does not address the management of livestock within the primary analysis area. It seems obvious to NWF that the elimination of livestock grazing within this area is a viable alternative for reducing the risk of transmission of disease between livestock and wildlife and "protecting the economic interest and viability of the livestock industry." Furthermore, the rationale for not considering the elimination of livestock (page 73) is inadequate. We understand federal legislation permits livestock grazing within Grand Teton National Park. However, the National Environmental Policy Act requires the evaluation of all reasonable alternatives, which can include alternatives that would require changes in legislation. Based on this we request that the plan be revised and impacts of eliminating livestock from the analysis area be fully analyzed in the EIS.	**24-12.** The agencies respectfully disagree that an alternative that eliminates grazing within Grand Teton National Park needs to be considered. The amount of cattle grazing in the park is low and continues to decline. Overall, grazing within the primary analysis area is on a downward trend (Draft Plan/EIS, p. 180). Only 160 cow-calf pairs grazed in the park in 2005 and 2006. Eliminating grazing in the park would not address the core issues identified in the Draft EIS (pp. 9–10), particularly the effects of inadequate winter range for high numbers of elk and bison and the use of supplemental feeding to maintain high elk numbers. The risk to livestock extends beyond park boundaries to wherever Jackson elk and bison ranges overlap with cattle, from Buffalo Valley to South Park to any ranches that winter cattle near the refuge. Not only is the vaccination of intact female cattle within the boundaries of Bridger-Teton, Shoshone, and Targhee national forests required by Wyoming (excepting calves at their mother's side), Grand Teton National Park requires that cows grazing on its lands be vaccinated. Proof of vaccination can be shown in two forms — documentation or vaccination records and the ear tag and shield on each heifer. Calves must be vaccinated before 18 months of age. Entering vaccination status into the public record is not necessary to ensure compliance.

Comment No.	Letter 24 (cont.)	Response
	Draft Bison and Elk EIS November 4, 2005 Page 5 The plan commits that cattle grazing would not be allowed during critical periods (February – July) in Grand Teton National Park to minimize the potential for disease transmission. NWF is aware that vaccination of cattle for brucellosis is required by Wyoming regulation. We suggest that as part of the permitting process the vaccination status of the cattle be entered into the public record.	
24-13	**Woody Vegetation** We recommend that the use of wildlife exclosures should follow the general strategy outlined in Alternative 6. Based on your analysis, Alternative 4 (Preferred) would result in greater impacts to mule deer and moose through the use of permanent large exclosures. We agree with your analysis that these impacts could be reduced through the use of smaller exclosures, rotated throughout the refuge as proposed in Alternative 6. Furthermore, we agree with your findings that rotating smaller exclosures would result in the largest amount of woody vegetation in healthy condition and provide the largest amount habitat for moose and mule deer. Based on these conclusions, we question why your preferred alternative did include this strategy. We recognize the management of the rotating exclosures would increase operational costs, but based on the benefits that you acknowledge, we believe these cost are necessary to meet the habitat conservation goal outlined in Management Goals (Page 32). Goal 1 for the refuge is "to provide secure sustainable ungulate grazing habitat that is characterized primarily by native composition and structure within and among plant communities…" Based on this goal we agree with your analysis that the use of rotational smaller exclosures would result in the greatest benefits to habitat conservation and we recommend that your preferred alternative be revised to include this strategy.	**24-13.** For the Final Plan/EIS the agencies have incorporated more adaptive management into Alternative 4, the Preferred Alternative. Larger, permanent exclosures would be replaced with smaller rotating ones in the long term. Reducing wintering elk numbers on the refuge, along with monitoring population and vegetation conditions, would make this change possible.
24-14	**Population Management** NWF is encouraged to see hunting of elk and bison is recognized as an effective tool to reach herd objectives. NWF believes that steps must be taken to ensure that the proposed hunting of bison is based on fair chase, ethical practices. Bison must be managed as wildlife and reduced to a reasonable population. Hunting is an important tool to reduce the Jackson bison herd to a level more appropriate with the ability of the area to support large grazers.	**24-14.** Alternatives 3, 4, 5, and 6 include a fair chase bison hunt on the refuge to manage the herd.
24-15	NWF is dismayed that the federal agencies would commit to specific bull:cow ratios for bison in the DEIS. We do not understand the rationale for setting that objective now, what the scientific underpinning of the objective is or whether the Wyoming Game and Fish Department agrees with this goal. NWF is not aware of other managed herds where the bull:cow rations are kept at 1:1. We are aware of current proposals from geneticists to maintain higher bull:cow ratios than commercial herds, but do not believe a 1:1 ratio is achievable with this herd.	**24-15.** In the Final Plan/EIS the agencies recommend this ratio, but they would work with the Wyoming Game and Fish Department to establish goals for bison ratios.
24-16	The proposed action discusses that American Indian tribes would be provided the opportunity to hunt bison on the refuge as a means of meeting herd objectives. We are encouraged that the USFWS and NPS recognize the important role of bison in American Indian culture. NWF regularly works in partnership with the InterTribal Bison Cooperative (ITBC) and we encourage you to discuss possible options for hunting opportunities with Native Americans through the ITBC as well as individual tribes.	**24-16.** Under Alternatives 3 and 6, and possibly Alternative 4, American Indian tribal members would have the opportunity to remove bison during a ceremonial event on the refuge.
	NWF supports elk management actions that will make real progress towards achieving Wyoming Game and Fish Department's elk population objective for the area. The most effective elk	

Comment No.	Letter 24 (cont.)	Response
	Draft Bison and Elk EIS November 4, 2005 Page 6	
24-17	management tool is recreational hunting and hunting must be provided in a consistent manner to help achieve the elk population objective. The complicated landscape of federal lands in the Jackson area and the associated diverse federal agency mandates makes wildlife management difficult and elk hunting particularly challenging. NWF recognizes these challenges and the complicated nature of the situation. We encourage all affected agencies (NPS, USFWS, and WGFD) to shoulder their fair burden in facilitating elk hunting as a population management tool. Grand Teton National Park was authorized under the premise that elk reduction would be necessary to maintain a healthy population of elk and minimize resource impacts of foraging elk. Grand Teton National Park must continue to provide opportunities to remove elk from the park while maintaining a quality and safe visitor experience. We encourage a cooperative and constructive dialogue with the WGFD and GTNP to consider new and creative mechanisms to more effectively reduce elk within the park.	**24-17.** The expansion of Grand Teton National Park in 1950 allowed for elk reduction in the park when necessary to manage the herd. This reduction is not mandatory. The National Park Service will continue to work with the Wyoming Game and Fish Department to facilitate herd management.
24-18	Similarly, the National Elk Refuge must re-examine opportunities to facilitate elk hunting on the refuge to help achieve the management objective and achieve their management goals. NWF understands that not all elk should be made vulnerable to removal by hunters; however, we suggest old assumptions and decisions regarding access should be re-evaluated in a cooperative manner with WGFD to achieve mutual success with elk population management. We suggest that these new ideas and commitments in elk reduction be committed to in writing to minimize misunderstandings by either state or federal parties.	**24-18.** The agencies believe that refuge access is adequate, with five parking areas (two of which are handicapped-accessible) and road use designed to provide a quality hunting experience that blends access with the ability for hunters to walk several miles from their vehicles if they desire. To aid in the retrieval of carcasses, certain roads are open for use after 2 p.m. The National Elk Refuge will continue to work closely with the Wyoming Game and Fish Department to achieve successful elk population management.
24-19	The agencies must also look at engaging the hunting public in this effort and encourage them to do their part by removing reproductive females from the population. Hunters who successfully remove adult females will be facilitating population management more than those only interested in removing large males. Therefore, we encourage development of new educational outreach mechanisms to encourage hunters to remove adult females and then perhaps provide awards recognizing these hunters for the valuable role they play in wildlife management.	**24-19.** The National Elk Refuge currently emphasizes antlerless harvest and has had an adequate number of hunters interested in removing these elk. There is no need to develop further educational outreach to encourage interest. Approximately 1,100 antlerless elk permits are distributed each year by means of a weekly draw. Bull elk are hunted during the first week of the annual refuge hunt; approximately 200 "any elk" permits are distributed.
24-20	Thank you for your consideration of our comments. If you have any questions about this letter, please feel free to contact me or Dyanne Singler, Land Stewardship Manager, at 303/441-5163 or singler@nwf.org. Sincerely, Stephen C. Torbit, Ph.D., Director Rocky Mountain Natural Resource Center National Wildlife Federation cc: Wyoming Wildlife Federation Wyoming Game & Fish Department InterTribal Bison Cooperative RECEIVED NOV - 7 2005 NER & GTNP ELK & BISON PLANNING OFFICE	**24-20.** Thank you for your comments.

Comment No.	Letter 25	Response
25-1	National Wildlife Refuge Association 1010 Wisconsin Avenue, NW, Suite 200, Washington, DC 20007 ■ 202-333-9075 ■ Fax 202-333-9077 ■ www.refugenet.org November 7, 2005 Bison/Elk Management Plan PO Box 510 Jackson, WY 83001 **RE: Draft Bison and Elk Management Plan and Environmental Impact Statement for the National Elk Refuge, Grand Teton National Park and John D. Rockefeller, Jr., Memorial Parkway** Dear Sir or Madam: The National Wildlife Refuge Association (NWRA) appreciates the opportunity to comment on the joint draft bison and elk management plan and environmental impact statement developed by the U.S. Fish and Wildlife Service (FWS) and National Park Service (NPS) for the National Elk Refuge (NER), Grand Teton National Park (GTNP) and John D. Rockefeller, Jr., Memorial Parkway. The NWRA is a 501(c)(3) nonprofit, national membership organization, established in 1975. The NWRA's mission is to protect, enhance and expand the National Wildlife Refuge System (NWRS), lands and waters set aside by the American people to conserve our country's diverse wildlife heritage. Over the years we have worked on behalf of our membership, comprised of current and former refuge professionals and members of the more than 200 refuge "Friends" group organizations throughout the United States, to make the Refuge System stronger and better able to address the growing challenges of conserving wildlife in our country. The NWRA endorses an improved Alternative 6 in the Draft Bison and Elk Management Plan and Environmental Impact Statement. Alternative 6 calls for restoring habitat, adaptively managing wildlife populations and completely phasing out the supplemental feeding program. The Association believes it is important to restore a natural balance to our wildlife populations. The supplemental feeding program creates unnaturally large populations of elk and bison in addition to artificially concentrating these animals on feed grounds within the National Elk Refuge. This program creates a high-risk environment for outbreaks of disease, including brucellosis, tuberculosis and chronic wasting disease (CWD). The supplemental feeding program must end if healthy wildlife populations are to be achieved. Due in part to litigation in the late 1990s, the draft management plan and environmental impact statement addresses the future management of bison and elk by the FWS and NPS. Currently, the	**25-1.** Thank you for your comments.

Comment No.	Letter 25 (cont.)	Response
	Jackson elk and bison herds comprise one of the largest concentrations of elk and bison in North America, at 13,500 and over 800, respectively. The bison population is growing on average by about 13% each year. High animal concentrations have contributed to a number of problems, including an increased risk of potential disease outbreaks, damage to habitat, unusually low winter mortality of bison and elk, and a high level of brucellosis in the elk and bison herds. U.S. Fish and wildlife policy directs that wildlife population levels on national wildlife refuges be maintained at levels consistent with sound wildlife management principles, that populations be managed for natural densities and levels of variation, 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 a single species. The winter feeding program, in existence since 1910, artificially concentrates wildlife on the National Elk Refuge, which leads to many problems, including a higher incidence of disease. Twenty-six percent of elk on the refuge test positive for brucellosis. In contrast, an average of one to three percent of free-ranging elk in western Wyoming test positive to the disease. Diseases such as chronic wasting disease, which is 100% fatal to elk, may soon show up in the Jackson herd. Major outbreaks of exotic diseases such as bovine tuberculosis and CWD, neither of which has yet been documented in the Jackson herds, could occur. Chronic wasting disease exists approximately 100-miles from Jackson Hole, and it grows closer each year. The disease has the potential to decimate elk, mule deer and bison populations. If CWD enters the Jackson Hole region when wildlife is concentrated on feedgrounds, the results may be catastrophic. The disease is 100% fatal to those animals it infects.	
25-2	According to the draft management plan, four goals were developed based on the purposes of the NER and GTNP, the missions of the National Wildlife Refuge System and the National Park System, and other legal and policy directives. Alternative 6, and its requirement to end the winter feeding program, would fulfill the four goals set out in the draft management plan as follows: • **Habitat Conservation**: Eliminating the feeding program, and, consequently, the concentrated wildlife conditions, would undoubtedly result in the restoration of native flora, such as willow, cottonwood, and aspen stands. Naturally dispersed wildlife would reduce pressure on plant species in localized areas. • **Sustainable Populations**: Eliminating the feeding program will disperse wildlife, which will directly reduce brucellosis infection rates and the risk of other exotic disease outbreaks, providing for healthier bison and elk herds. Dispersed wildlife populations relying on natural food sources will directly relate to more natural elk and bison populations. • **Numbers of Elk and Bison**: Eliminating the feeding program will return wildlife densities to their natural levels and population fluctuations. The current system of wildlife feeding creates an artificially high density of elk and bison on the refuge. Wildlife populations should match the carrying capacity of available habitat. • **Disease Management**: Eliminating the feeding program will disperse wildlife populations and reduce the risk of disease outbreaks and the spread of diseases such as brucellosis.	**25-2.** Alternative 4 (the Preferred Alternative in the Final Plan/EIS) has been modified to emphasize adaptive management. It does not specify the number of years that feeding would take place nor that it would be eliminated. Instead, it focuses on achieving the desired conditions for sustaining bison and elk populations over time. Working in close cooperation with the Wyoming Game and Fish Department, the U.S. Fish and Wildlife Service would decrease the need for supplemental feeding on the refuge based on existing conditions, trends, new research findings, and other changing circumstances.

Comment No.	Letter 25 (cont.)	Response
	The NWRA recommends some additional improvements to Alternative 6.	
25-3	Bison should be managed according to science-based principles of wildlife management and ecology. The bison herd of the NER and GTNP should not be reduced to the lowest genetically viable population. The number of bison should match the carrying capacity of the available habitat.	**25-3.** The agencies agree that science-based principles and available habitat should guide bison management. The Final Plan/EIS incorporates information from recent population modeling done to determine a minimum herd size that would conserve bison genetic diversity (Gross et al. 2006). Under the Preferred Alternative in the Final Plan/EIS the agencies would work collaboratively with the Wyoming Game and Fish Department to maintain and ensure a genetically viable population of approximately 500 bison. Additionally, reductions in the number of elk wintering on refuge, the development of a framework for implementing adaptive management actions to progressively transition from intensive supplemental feeding to greater reliance on free-standing forage, and habitat restoration would reduce the degradation of habitat that is now occurring on the refuge during the winter. Other adaptive measures could be used if warranted, for example, introducing unrelated bison into the herd or managing for an even sex ratio.
25-4	Migration routes and seasonal ranges for big game should be restored and protected to facilitate dispersion of wildlife throughout their native habitat. The wildlife and land management agencies in western Wyoming should work cooperatively to ensure wildlife movement between important habitats.	**25-4.** Actively restoring migrations to wintering areas outside the refuge and the park is outside the agencies' jurisdiction. As stated in the Draft Plan/EIS, there is no direct evidence to verify that historic migration routes existed, even though there are many anecdotal reports that it did (Draft EIS, p. 118). Currently, the Wyoming Game and Fish Department does not have plans to phase out feeding on state feedgrounds, nor does the agency support efforts to expand elk migration out of Jackson Hole. As long as feedgrounds exist in Wyoming, it will be difficult to establish migration.
25-5	No vaccines should be administered to big game in the NER and GTNP. A moratorium should be placed on vaccinations for elk and bison until an effective vaccine for protection against brucellosis or CWD has been developed.	**25-5.** Thank you for your comments.
25-6	For the reasons stated above, the National Wildlife Refuge Association endorses an improved Alternative 6 in the Draft Bison and Elk Management Plan and Environmental Impact Statement. As the draft management plan states: "All of the biological issues identified stem from the winter feeding program." The winter feeding program is the primary reason for the concentrated conditions that are at the core of the major wildlife and habitat problems at the NER and GTNP. Therefore, the supplemental feeding program must be eliminated.	**25-6.** Thank you for your comments.
25-7	Thank you for the opportunity to comment on this draft management plan. If you have any questions regarding this letter or need additional information, please do not hesitate to contact me at (202) 333-9075. Sincerely,  Evan Hirsche President National Wildlife Refuge Association 	**25-7.** Thank you for your comments.

Comment No.	Letter 26	Response
	The Science and Conservation Center  July 28, 2005 Bison and Elk Management Planning Office PO Box 510 675 East Broadway Jackson, WY 83001 Sir/Madame:	
26-1	I am writing in response to the Draft Bison/Elk Management Plan of July 20, 2005.	**26-1.** Thank you for your comments.
26-2	I believe the Draft EIS has explained the problems at hand quite well, but I see two flaws in the proposed draft. First, after researching the concept of contraception for several years, apparently the published literature on successes with this approach have been ignored. This is not an issue of whether or not it would work – it does and has been documented – but whether or not the technology might be put to work. This puzzles me.	**26-2.** Wildlife fertility control as a technology is rapidly advancing. Many research projects have proven that several drugs and vaccines are capable of preventing pregnancy in most wildlife species that have been studied. However, major challenges exist when applying fertility control techniques to long-lived, free-ranging populations of wildlife. Surgical sterilization and biochemical contraception (porcine zona pellucida [PZP]-type vaccine, SpayVac; gonadatropin releasing hormone [GnRH]-type, GonaCon; and Leuprolide) were considered as possible methods to control reproduction in elk and bison. At the time of the Draft Plan/EIS, these techniques required that bison and elk be handled, and either anesthetized or physically restrained to permit handling, whether to perform an operation (surgical sterilization), to mark the animals with "Do Not Consume Tags" (SpayVac and GonaCon), or to hand inject a drug (Leuprolide). In the case of the Jackson elk herd, the number of animals that would have to be handled each season to effectively reduce population growth was judged to be so large that it would be economically and logistically infeasible. Fertility control in bison was analyzed under Alternative 2 because fewer bison would have to be treated, and therefore, would be much more feasible.
26-3	Second, I actually find it offensive to promote hunting within Grand Teton National Park. I am not opposed to hunting (I have hunted most of my life) nor am I a member of any group opposing hunting, but hunting in our national parks violates the spirit of their creation and very reason for existence. I'm not crazy about the concept of hunting on wildlife refuges either but hunting in national parks crosses the line (but then, so doers grazing).	**26-3.** The Draft Plan/EIS did not "promote hunting" in national parks. Legislation that expanded Grand Teton National Park in 1950 (Public Law 81-787) provided for an elk reduction program. Section 6 of the law requires the National Park Service and the Wyoming Game and Fish Commission to develop a program for the permanent conservation of elk within the park, as well as annual approval for such a program by both the Secretary of the Interior and the Governor of Wyoming (PL 81-787, 16 USC 673c). As set out in the law, hunters participating in the controlled reduction of elk (when necessary for proper management) are licensed by the state and are deputized as park rangers. The law does not require that the park have an elk reduction program if herd growth does not warrant it.
	Thank you for the opportunity to respond to the EIS. Cordially, Jay F. Kirkpatrick Jay F. Kirkpatrick, Ph.D. Director RECEIVED AUG - 3 2005 NER & GTNP ELK & BISON PLANNING OFFICE ZOOMONTANA 2100 South Shiloh Road • Billings, Montana 59106 • Phone 406 652-9718 • Fax 406 652-9733	

Comment No.	Letter 27	Response

SIERRA CLUB
FOUNDED 1892

PO Box 12047
Jackson, WY 83002
(307) 733-4557
kate.drexler@sierraclub.org

November 3, 2005

Dear Bison and Elk Management Team:

On behalf of the Wyoming Chapter of the Sierra Club I'm writing to comment on the Draft Bison and Elk Management Plan and Environmental Impact Statement. Our biggest concern with current management practices is the elk feeding program, which, consequently, concentrates the elk and bison herds in large and artificial numbers. The unnaturally high densities of elk and bison drastically increase the potential for transmission of wildlife diseases such as brucellosis, chronic wasting disease, and tuberculosis. In addition, these artificial concentrations cause overuse of select range lands, impairing the natural health of the ecosystem. If the feeding program continues our Jackson bison and elk herds could face disease of epidemic proportions, scarring the world class wildlife and ecosystem in the Jackson Hole valley.

27-1

The preferred alternative outlined in the Draft Management Plan and EIS will not adequately solve this problem, because it fails to phase out the feeding program. Alternative 6, with an emphasis placed on the items below will address this overarching problem.

27-2 1) A more rapid transition to the phase out of the feeding program.
27-3 2) Focus on restoration of natural winter ranges as a way to disperse bison and elk herds in the shortest time possible
27-4 3) No vaccinations given to wildlife
27-5 4) Manage bison as any other big game species

27-6 Our communities' economy and high quality of life are dependent upon having healthy, sustainable wildlife populations. We hope that you will support Alternative 6 with the improvements that were highlighted above so that these herds may continue to thrive.

Sincerely,

Kate Drexler
Associate Regional Representative

27-1. Thank you for your comments.

27-2. The agencies believe that completing the transition to native winter range and phasing out refuge supplemental feeding would need to be done after elk and bison numbers have been reduced and forage has been enhanced. Implementation would take a number of years, and it is unlikely that these objectives could be achieved in less than five years. Increased harvest during the transition period would decrease elk and bison numbers, bringing numbers more in line with available forage. Enhanced irrigation and cultivation on parts of the refuge would improve forage quality and quantity under Alternative 6, adding to amounts of available native forage.

27-3. The U.S. Fish and Wildlife Service and the National Park Service would continue to work with the Wyoming Game and Fish Department and the U.S. Forest Service to restore natural winter ranges as part of the Jackson Interagency Habitat Initiative.

27-4. Thank you for your comment.

27-5. The agencies agree that Jackson bison should be managed as a big game species, a species sharing an ecosystem with other species.

27-6. Thank you for your comments.

Comment No.	Letter 28	Response

Sportsmen for Fish & Wildlife

From the desk of Don Peay

October 30, 2005

Jackson Bison and Elk Management Planning Office
Attn: Laurie Shannon
PO Box 510
Jackson, Wyoming 83001

28-1 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.

Our family loves the Jackson Hole area, and spends a lot of time there hunting, camping and vacationing in the town. The winter elk refuge is an annual visit.

28-2 The public lands of the west our 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.

28-3 In 1912 the National Elk Refuge was established and elk feeding has taken place for nearly 100 years. To change this program is a violation of the public trust for which the Refuge was established.

28-4 I have had many great outdoor experiences in the Gros Ventre Wilderness. Alternative 4 will greatly limit those experiences for my children and grand children. In respect of the last 100 years of wildlife management in the Jackson area, and for generations in the future, please implement Alternative 5. Bison hunting in Alternative 5 is the best economic and social way to control the bison herd.

Sincerely,

Don Peay
Bountiful, Utah

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Bountiful, Utah 84010
(801) 635-5576
don@sfwsfh.org

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28-1. Thank you for your comments. The agencies believe that healthy and sustainable elk and bison populations would provide the best revenue protection over the long term, and they believe that Alternative 5 would not be sustainable over time because of disease issues.

28-2. Priorities differ greatly among stakeholders. The wishes of the public — both locally and nationally — have been diverse. Alternative 4 (as modified in the Final Plan/EIS) is a moderate alternative that attempts to strike a balance between stakeholders' wishes and the need to manage the bison and elk populations in accordance with accepted wildlife management principles.

28-3. The Draft and Final EISs analyzed the supplemental feeding program on the National Elk Refuge and incorporated information linking high animal concentrations with higher disease prevalence and transmission. Offering management alternatives that would decrease or eliminate supplemental feeding on the refuge does not violate public trust. The National Elk Refuge would continue to be a "winter elk preserve" (Stat. 293 1912) and would continue to provide "grazing habitat for elk and other big game animals" (44 Stat. 1246, 16 USC 673a).

28-4. Alternative 4 (in the Draft and Final Plan/EIS) would continue to provide many opportunities for great outdoor experiences, including hunting opportunities.