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Appendices

APPENDIX A

Agreement Number G1505030007

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
AND THE
STATE OF SOUTH DAKOTA, DEPARTMENT OF GAME, FISH AND PARKS

This Agreement is entered into by and between the National Park Service (hereinafter "NPS"), United States Department of the Interior, acting through the Superintendent of Wind Cave National Park (hereinafter "Park"), and the State of South Dakota, Department of Game, Fish and Parks (hereinafter "State"), acting through the Secretary of said Department.

ARTICLE I – BACKGROUND AND OBJECTIVES

The objective of this Agreement is to establish the standards, terms, conditions, roles and responsibilities in the project planning and National Environmental Policy Act (as amended) (NEPA) process for development of an elk management plan and a chronic wasting disease management plan for Wind Cave National Park. The NPS is required by law to develop both of these management-planning documents in accordance with NEPA, agency policy, and applicable laws. The State has been invited to serve as a formal cooperator in the development of these plans.

Elk Management Plan: The NPS is mandated to maintain natural resources on National Park lands in an unimpaired condition. Concerns about an overabundant or over concentrated population of elk residing in the Wind Cave National Park and the surrounding area have surfaced recently. In 2002, the Park completed an environmental assessment for a proposed boundary expansion. During the public comment period the need for a regional elk management plan affecting adjacent landowners was highlighted. In addition, the State and Park need scientific data reflecting population size, herd movements, and land carrying capacity for wildlife over which they have jurisdiction. The State annually evaluates its management policies on a unit by unit basis and currently desires management changes in some units. The end goal would be the development of a Black Hills elk management plan

Chronic Wasting Disease: Chronic wasting disease has affected elk, white-tailed and mule deer in areas of the southern Black Hills, including Wind Cave National Park. There is no known treatment for the disease. Live deer can be tested for the disease by taking a tonsillar biopsy and analyzing the sample in a lab. Methods of obtaining animals for testing include hunter harvest, take of animals demonstrating clinical signs, and animals involved in motor vehicle accidents. This allows park managers and the Department of Game, Fish and Parks to determine the prevalence of the disease inside and/or adjacent to

the park in deer populations. There is no live test for elk. Chronic wasting disease is recognized as a national issue and addressing the disease as part of this plan may delineate park and other agency actions as a part of a national and~~/or~~ regional strategy to address the disease.

ARTICLE II – AUTHORITY

A. Federal:

The Act of August 25, 1916, as amended, 16 *U.S.C. § 1, 2-4 (1988),* declares that the NPS will promote and regulate the use of the various federal areas known as units of the national park system by such means and measures as conform to the fundamental purpose of the national park system, which purpose is to conserve the scenery and natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

The Act of January 9, 1903, 16 *U.S.C. § 141-146,* established Wind Cave National Park (32 Stat. 765-766), to protect Wind Cave.

The act of August 10, 1912, provided for the establishment of Wind Cave National Game Preserve on the land included within the boundaries of Wind Cave National Park under the jurisdiction of what was then the Bureau of Biological Survey of the U.S. Department of Agriculture. This action established "a permanent national range for a herd of buffalo to be presented to the U.S. by the American Bison Society, and for such other native American game animals as may be placed therein."

B. State:

South Dakota Codified Laws and Constitution, 41-3-3. Cooperation with federal agencies in propagation, preservation and protection of game and fish – Expenditure of funds. The State of South Dakota having assented to the provisions of the act or acts of Congress authorizing federal participation with the various states in projects for the propagation, preservation, and protection of game and fish which assent is hereby continued, the Department of Game, Fish and Parks is expressly authorized and empowered to cooperate with the appropriate agency, department, or commission of the federal government in projects for the propagation, preservation, and protection of game and fish and to use and expend funds of the department in connection with like appropriations of the federal government for such projects.

To satisfy the mutual responsibilities and interests and to derive mutual benefits, the NPS and the State agree to engage in a number of activities as detailed below:

ARTICLE III – STATEMENT OF WORK

A. The NPS agrees to:

1. Be responsible as lead agency for the preparation, publication, and distribution of the elk and chronic wasting disease management plan(s) and associated Environmental Impact Statement(s) (EIS) and record(s) of decision for the Park. The plan(s) and EIS(s) will comply with the requirements of NEPA, U.S. Council on Environmental Quality, and NPS policies. The National Park Service's implementing procedures, as contained in Director's Order-12 and Conservation Planning, Environment Impacts Analysis and Decision Making, will be followed.

2. Act as cooperator on the State's plans.

3. Have sole approval authority and responsibility for proposed actions within Wind Cave National Park.

   The NPS has particular expertise in, knowledge of, and responsibility for wildlife species and their habitat inside Wind Cave National Park. Specific contributions (in accordance with NEPA) include but are not limited to:

   Natural Resources on NPS Lands
   Cultural Resources on NPS Lands
   Chronic Wasting Disease Information
   Threatened and Endangered Species
   General Ecological Information
   Socioeconomic Concerns
   Visitor Use Concerns

B. The State of South Dakota agrees to:

1. Be responsible as lead agency for the updating and maintenance ~~preparation~~ of a Black Hills elk and a statewide chronic wasting disease management plan(s) along with their associated research, management and public relations involvement strategies.

2. Act as a cooperator and consultant in the preparation of the Wind Cave National Park elk and chronic wasting disease management plans and EISs. The state will act as a cooperator on the Park's management plans because 1) cooperator status will allow the NPS and State of South Dakota to effectively coordinate management planning efforts and share expertise on these regional issues; 2) actions solely under the jurisdiction and authority of the State of South Dakota generally are not subject to NEPA process requirements; 3) management jurisdictions are defined by park boundaries, although animals are free to cross jurisdictional boundaries, and 4) agreement will not be

necessary for each agency to finalize and implement their respective management plans.

The State of South Dakota, through the Department of Game, Fish and Parks, has particular expertise in, knowledge of, and responsibility for management of the state's wildlife species and hunting and fishing regulations. Specific contributions to each plan include but are not limited to:

Wildlife Management Practices (e.g., hunting, trapping)
Chronic Wasting Disease Information
Threatened and Endangered Species
General Ecological Information
Socioeconomic Concerns

C. The NPS and State of South Dakota agree to:

1. Meet regularly and will draft the plan and environmental documents.

2. Designate staff representatives to form a core planning team.

3. Fund their individual participation in this process.

4. Have a representative participate at ~~all~~ public meetings relating to the issues covered by this Agreement.

5. Fully inform each other of and coordinate, to the best of their ability, all management planning efforts.

The NPS and State of South Dakota bring special expertise to the development of the management plans. Each will bear its own costs for development of information directly related to its areas of expertise and plan implementations as described below.

ARTICLE IV – TERM OF AGREEMENT

This Agreement will be effective for a period of five years from the date of final signature, unless it is terminated earlier by one of the parties pursuant to Article VII that follows.

ARTICLE V – KEY OFFICIALS

A. Key officials are essential to ensure maximum coordination and communications between the parties and the work being performed.

1. **For the NPS:**

Linda L. Stoll, Superintendent
Wind Cave National Park
RR1, Box 190
Hot Springs, South Dakota 57747
e-mail: linda_stoll@nps.gov
Telephone: (605) 745-4600
Facsimile: (605) 745-4207

2. **For the State:**

John Cooper, Secretary
South Dakota Game, Fish & Parks
Foss Building, 523 E. Capitol
Pierre, South Dakota 57501-3182
e-mail: john.cooper@state.sd.us
Telephone: (605) 773-3381
Facsimile: (605) 773-6245

ARTICLE VI – PROPERTY UTILIZATION

OMB Circulars and 43 CFR 12, Subpart F, 12.930 - 12.948 Establishes property management standards for this Agreement.

ARTICLE VII – MODIFICATION AND TERMINATION

A. This Agreement may be modified only by a written instrument executed by the parties.

B. Either party may terminate this Agreement by providing the other party with thirty (30) days advance written notice. In the event that one party provides the other party with notice of its intention to terminate, the parties will meet promptly to discuss the reasons for the notice and to try to resolve their differences. This Agreement will be terminated 60 days after completion of approved elk and chronic wasting disease plan(s) and final EIS(s).

ARTICLE VIII – STANDARD CLAUSES

A. Special Provisions

Publications of Results of Studies

No party will unilaterally publish a joint publication without consulting the other party. This restriction does not apply to popular publication of previously published technical matter. Publications pursuant to this Agreement may be produced independently or in collaboration with others; however, in all cases proper credit will be given to the efforts of those parties contributing to the publication. In the event no agreement is reached concerning the manner of publication or interpretation of results, either party may publish data after due notice and submission of the proposed manuscripts to the other. In such

instances, the party publishing the data will give due credit to the cooperation but assume full responsibility for any statements on which there is a difference of opinion.

Public Information Release

No party will unilaterally publish a public information release without consulting the other party. The specific text, layout, photographs, etc. of the proposed release must be submitted with the request for approval.

ARTICLE IX – SIGNATURES

IN WITNESS HEREOF, the parties hereto have executed this Agreement on the date(s) set forth below.

FOR THE NATIONAL PARK SERVICE:

Signature: Linda L. Stoll

Name: Linda L. Stoll

Title: Superintendent, Wind Cave National Park

Date: July 17,2003

FOR THE STATE OF SOUTH DAKOTA, GAME, FISH & PARKS

Signature: John L. Cooper

Name: John L. Cooper

Title: Secretary / SD GF&P

Date: July 16, 2003

APPENDIX B

Memorandum—National Park Service Response to Chronic Wasting Disease of Deer and Elk, July 26, 2002

July 26, 2002

N16 (2300)

Memorandum

To: Regional Directors
From: Director /s/ Randy Jones (for)
Subject: National Park Service response to chronic wasting disease of deer and elk

The purpose of this memo is to provide regions and parks with guidance on the National Park Service (NPS) response to chronic wasting disease (CWD), which is a fatal neurological disease of deer and elk. The disease has occurred in a limited geographic area of northeastern Colorado and southeastern Wyoming for over 20 years. Recently, CWD has been detected in captive and free-ranging deer and elk in several new locations in the United States, including western Nebraska, southwestern South Dakota, western Colorado, southern New Mexico, and for the first time east of the Mississippi River in Wisconsin.

Although Rocky Mountain National Park is the only NPS unit where CWD is known to occur, several NPS units are at high risk due to their close proximity to the newly identified areas of disease occurrence. In addition, there is a definite likelihood that CWD will be detected in other areas of the country following increases in surveillance for the disease. Therefore, CWD has become an issue of national importance to wildlife managers and other interested publics, including the NPS.

CWD is in the family of diseases known as the transmissible spongiform encephalopathies (TSEs) or prion diseases. Other TSEs include scrapie in sheep, bovine spongiform encephalopathy (BSE or mad cow disease), and Creutzfeldt-Jacob disease (CJD) in humans. CWD causes brain lesions that result in progressive weight loss, behavioral changes, and eventually death in affected deer and elk. There is currently no evidence that CWD is transmissible to humans or domestic livestock; however, the disease could limit populations of deer and elk and could result in profound impacts on the recreational value of these species. In an attempt to control chronic wasting disease, the states of Colorado and Wisconsin are drastically reducing free-ranging deer and elk numbers in affected areas.

The NPS, working within our mission and management policies, should cooperate with states in preventing and controlling CWD in park units. Although the origin of CWD is unknown, it is strongly suspected that CWD is a non-native disease of deer and elk in parks. Therefore, I am asking each region and park to:

- Cooperate and coordinate with state wildlife and agriculture agencies regarding proposed prevention, surveillance, research, and control actions for CWD.
- Parks in close proximity (60 miles) to areas where CWD has been detected should initiate a targeted surveillance program to monitor for deer and elk with clinical signs of the disease and submit samples for diagnostic testing from all deer and elk found dead.

- Immediate action should be taken, on a limited scale, to address imminent threats such as a deer or elk exhibiting clinical signs of CWD. Euthanasia of CWD suspect deer or elk with samples submitted for diagnostic evaluation is a reasonable response.
- Prior to undertaking larger scale or multiple animal actions within a park (e.g., population reduction of deer and elk) environmental planning documents, including NEPA and, if applicable, Section 7 consultation with the US Fish and Wildlife Service, will need to be prepared.
- Proposed translocations of live deer or elk into or out of NPS units must receive critical review and CWD risk assessment. Deer or elk will not be translocated from areas where CWD is known to occur or where there is inadequate documentation to confirm absence of the disease (i.e., prevalence <1% with a 99% confidence interval).
- Use of park or regional public affairs staff to assist in outreach to surrounding communities and communications to park visitors regarding CWD and CWD management is encouraged.
- Remain alert to potential threats from CWD and contact the NPS Biological Resource Management Division (BRMD) or state wildlife agencies if further information or animal testing is needed.

Chronic wasting disease is currently in the spotlight with the public, States, Department of the Interior (DOI), United States Department of Agriculture (USDA), and Congress. A Congressional hearing on CWD has been held and a joint DOI-USDA-State Working Group Task Force has been established to address the CWD issue. The NPS has been an active participant in these processes. This broad level of participation increases our need to remain internally connected and coordinated at the park, regional, and national level, and to assure that our actions are consistent with agency policy.

The BRMD will provide assistance to regions and parks in prevention, surveillance, and control of CWD. The BRMD has also partnered with the USGS National Wildlife Health Center to provide additional assistance. General information and links to other websites on CWD are available through the BRMD section of InsideNPS. If you have technical questions, need more information or animal testing, please contact Dr. Margaret Wild, NPS Wildlife Veterinarian, BRMD, at (970) 225-3593. If you have policy questions regarding NPS response to CWD, please contact Michael Soukup at (202) 208-3884.

cc: Max Peterson, IAFWA
Steve Williams, USFWS
Kathleen Clarke, BLM
Denny Fenn, USGS
Jake Hoogland, NPS EQD

APPENDIX C

Monitoring and Adaptive Management Plan

TABLE OF CONTENTS

I. INTRODUCTION AND OVERVIEW

Adaptive management is a central theme of the action alternatives analyzed in the Elk Management Plan / Environmental Impact Statement for Wind Cave National Park.

Monitoring of the bison, elk, and prairie dog populations and range forage/carrying capacity of park lands are key to the success of this plan. Adaptive management is based on a continuing, iterative process of applying management actions, monitoring consequences, evaluating monitoring results against objectives, adjusting management actions, and using feedback to make future management decisions. The adaptive management process for elk population within the Park would include evaluating the effects of management actions (for example, reduction of elk numbers) on other biological resources within the Park and identifying whether and how these practices should be modified to meet the objectives of the selected management action for the Park. Monitoring activities would be selected and designed to test the success and effectiveness of management actions in the Park. This proposed monitoring plan for the Elk Management Plan would provide the basis for the monitoring activities.

The specific objectives of the monitoring plan are:

- Reduce uncertainty of current conditions by gathering additional information where data are lacking.
- Develop, if needed, and implement standardized protocols for data collection that are cost effective, efficient, and explicitly linked to management actions. Also, develop thresholds/criteria for data evaluation that will facilitate the adaptive management process.
- Contribute to adaptive management by evaluating the success or failure of management actions to conserve/improve biological integrity.

Sampling under the proposed monitoring plan is not intended to replace monitoring that has been or is currently being performed under other programs in Wind Cave National Park (such as exotic species monitoring). Instead, monitoring would use data already collected and implement additional sampling protocols that may be developed for this plan.

II. MONITORING PROGRAM

A. Range Forage/Carrying Capacity

Wind Cave National Park is monitoring range production and condition within the park boundaries. By determining forage availability and condition of the range, the park can determine how many grazing animals it can support without degrading the range. These monitoring efforts provide the information necessary to maintain native plant and animal populations.

The park currently determines the forage capacity (in Animal Unit Months) by using two Natural Resource Conservation Service (NRCS) methods. The first is an ecological type paper exercise using the NRCS Technical Guides for the Black Hills. The second is a research exercise using the NRCS double-sampling method (NRCS 1997).

The park has approximately 28,295 acres of mixed-grass prairie and ponderosa pine forest with granite outcrops, limestone plateaus, red valleys, and hogbacks. Approximately 63% is considered mixed-grass prairie.

Animal Unit Month Estimate by Seral Stage Method

The first method divided the park into range sites and grazeable woodland sites. The NRCS guide provides initial recommended stocking rates for each site in four different seral stage conditions (early, early intermediate, late intermediate, late), and three levels of canopy closure (sparse, medium, dense). Late seral stage produces more “animal unit months” (AUMs) than land in early seral stage.

Once the park determined how many AUMs the land can support based on forage production estimates, the number of grazing animals could be determined for each of the park’s key species. A population range for each species could be determined through a forage allocation formula.

The NRCS methodology for determining AUMs allocates 50% of the forage for vegetation regeneration. The remaining forage is split by allocating 25% for consumption by the key species, including bison and elk at Wind Cave NP. The remaining 25% is allocated for other herbivores like antelope, deer, and grasshoppers, as well as that portion damaged from natural events like storms and trampling. Prairie dogs are accounted for in the AUMs by assigning range condition as early seral stage to all acres of prairie dog towns.

The AUMs estimated to be available for bison and elk (25% of total available production), according to the NRCS Technical Guides, are:

Range + Grazeable Woodland (Medium Canopy)	Estimated AUMs Produced
If all park lands in Late Seral Stage	14,146
If all park lands in Late Intermediate Stage	10,065
If all park lands in Early Intermediate Stage	6,971
If all park lands in Early Seral Stage	3,448

According to this method, 14,146 is the most AUMs the park can have available for bison, prairie dogs, and elk during years of favorable conditions (e.g., average precipitation) if the entire park were in late seral stage and all forested areas had a medium canopy cover. The only way to increase available AUMs would be to decrease the amount of forest or to reduce forest canopy cover from medium to sparse in all forested areas, increasing the amount of grasses available. However, this reduction in forest cover would not result in a proportional increase in the amount of grass cover.

AUM Estimate by Double-Sampling

The second method used by the park was the NRCS double-sampling methodology of estimating production in plots, and clipping/drying vegetation from plots. Thirty-six transects were placed throughout the park within each category of range or grazeable woodland site.

The AUMs available for bison and elk (sampled from July to August of 2004) was 5,347, which was lower than that predicted through AUM estimates by the seral stage method. The double-sampling data, compared to the seral stage estimate described above, placed park vegetation between early intermediate and early seral stages. However, actual field conditions placed park vegetation between late intermediate and early intermediate stages. The double-sampling results may be low due to overgrazing, three years of drought prior to the testing, and/or other potential factors. In addition, the double-sampling did not take into account the grazing that occurred prior to sampling, or percent vegetative growth completed by date of sampling.

Twelve more transects were added for the 2005 field season, and production within plots was estimated for current year available production, and for current year production in absence of grazing. At the beginning of the growth year, utilization cages (exclosures) were placed in association with several transects. Vegetation within cages was clipped in the fall and the subsequent growth provided information about forage production in the absence of grazers. Vegetation within the exclosures did not provide information about the rate of production resulting from repeated foraging by wildlife. In 2005, forage sampling showed the park produced 9,192 AUMs, compared to 5,347 in 2004.

Conclusion from Both Methods

Available forage for elk may vary from year to year (as demonstrated by 2004 and 2005 double-sampling results), depending on environmental conditions (i.e., temperature, rainfall, etc.), the number of foragers using the range, the number of acres of prairie dog towns, and the ability of the vegetation to recover from the previous year's usage.

The maximum AUMs possible using the seral stage method could be 14,146 AUMs produced, assuming the entire park was in late seral stage and medium canopy. However, only a small portion of the park's land is in late seral stage (about 10%) and the park has no plans to manage toward a larger percentage of late seral stage. Park staff decided to use 10,065 AUM of estimated annual production as a benchmark for

determining available forage. If all park lands were in late intermediate seral stage, the park would be expected to produce 10,065 AUMs annually.

The vegetation within prairie dog towns ranges from late intermediate to early intermediate seral stage (as determined through field surveys), resulting in the estimated annual forage production to drop from 10,065 AUMs to 9,385 AUMs with 2,800 acres of prairie dog colonies. If these acres trend from late intermediate to early seral stage (due to the presence of prairie dogs), the estimated annual forage production would decrease from 10,065 AUMs to 8,945 AUMs. In an effort to be as conservative as possible with its range land, the park will consider all prairie dog acres as early seral stage, resulting in an estimated 8,945 AUMs available for elk and bison. Adjusting the AUMs in this way to account for prairie dogs eliminates the need to conduct detailed prairie dog counts and to assign specific AUMs for prairie dog consumption.

The preliminary results of the 2005 double-sampling found 9,192 AUMs; 2005 was considered to be an average year. Given that the estimates from both methods were very close, the NRCS estimate of 8,945 AUMs (adjusted for 2,800 acres of prairie dogs) was suggested to be representative of average annual forage production available for bison and elk.

The available forage may vary from year to year depending on the weather conditions (especially rainfall), the number of other foragers using the range, and the ability of the vegetation to recover from the previous year's usage. To represent the forage production/availability in a drought year, the 2004 sampling data (5,347 AUM's) was recommended to be considered as a minimum available forage production year.

Custer State Park, which is located to the north of Wind Cave NP, uses a similar seral stage method, which estimates base forage condition during the summer. An estimate of forage production for a particular site is obtained from the NRCS production tables and range site inventories for condition class. Based on the water year (October through September), Custer State Park projects what the range will produce the next summer. This is done prior to the fall reductions of elk and bison (via hunting and roundups). If the forage projection indicates the range will produce 80% of normal forage, they will reduce wildlife and bison populations to 80% of normal.

By completing the production estimates prior to the fall, estimates of animals the range could support could also be completed in the fall by Wind Cave NP. Animals that would exceed available projected forage would be removed, either through hunting outside the park, or by other means within the park.

B. Wildlife Population Estimates

Wind Cave National Park uses two methods to survey elk. The first is aerial counts to obtain an over-wintering herd size. These are usually conducted between January and March when there is snow cover on the ground to aid in spotting elk from the air. The second survey method is ground count of elk. This method is not as accurate as aerial methods, but is utilized to get estimates of the number of elk utilizing the Park throughout the year.

Following the completion of the bison roundup and while helicopters are still available, an aerial survey is conducted to count the bison that have not been captured. This is done prior to the release of captured bison back into the park. With bison contained in the corral facility, a count of the remaining animals in the park is easily facilitated to get a total count of bison in the park. The number of calves counted is the major determinant of the number of bison yearlings to be culled the following year.

A monitoring program also exists to determine the acreage used by prairie dogs and the size of the park's population. Monitoring consists of mapping prairie dog colony acreages and conducting prairie dog burrow counts.

III. MANAGEMENT ACTIONS AND ASSOCIATED MONITORING NEEDS

For each management action, the monitoring actions and objectives would remain the same, regardless of the alternative chosen.

Management actions and their associated monitoring requirements would remain constant for any of the action alternatives chosen. Under the no-action alternative (alternative A), current elk management practices would continue.

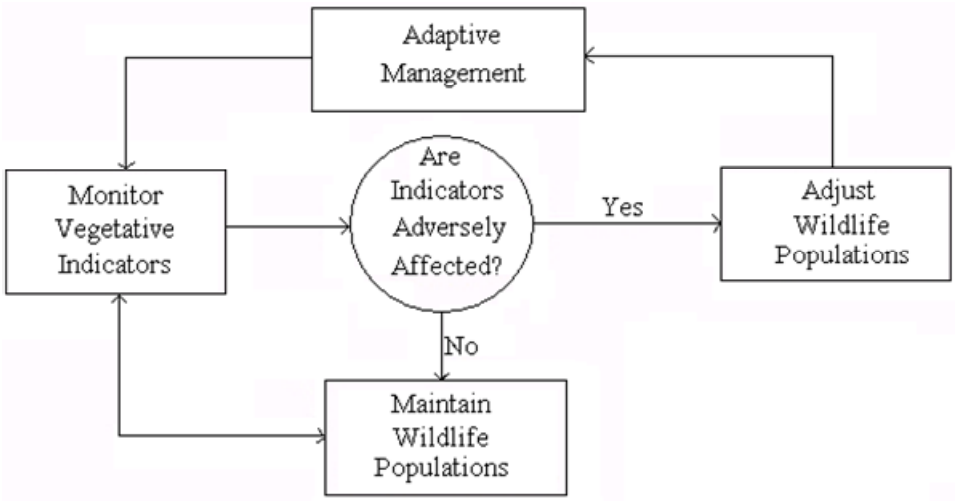

FIGURE 1. ADAPTIVE MANAGEMENT

Key Data

Wildlife

Elk population - information on elk numbers utilizing the park is critical; after elk population reduction, it would be necessary to complete follow-up counts to determine the success of reduction efforts. Of particular importance would be a determination of elk moving into the park from adjacent lands to determine after-treatment population and potential migration patterns.

Prairie dog colonies – information is needed in order to correlate the acres of park lands moved into early seral stage and thus reduced in forage productivity.

Bison population – information is needed in conjunction with forage utilization and availability.

Vegetation

Vegetative ecological type - required in order to determine animal unit months available according to range sites. This is used in conjunction with NRCS initial recommended stocking rates for each site.

Vegetative production of plots - needed to determine the actual forage production of park lands. This is completed by actual surveys using the NRCS double-sampling methodology of estimating production in plots, and clipping/drying vegetation from thirty-six transects located within the park.

Descriptions of monitoring protocols for each data category are provided in attachment 1 to this appendix. The descriptions include a brief explanation of the protocol itself and the reason for collecting the data.

IV. ADAPTIVE MANAGEMENT FRAMEWORK

The adaptive management framework describes two different adaptive management strategies. First, the park will evaluate the effectiveness of implementing its preferred alternative. Second, the target elk population level will be evaluated in terms of impacts to the vegetation and the forage allocation. Each of these strategies are described below.

Management Action Strategy

As described in Chapter 2, the park has identified Alternative B as its preferred alternative. This alternative requires changes in the park fence that will allow elk to disperse to areas outside the park where they will become part of the huntable elk population. This alternative is intended to be used during both the initial reduction and maintenance phases. However, there is a certain level of uncertainty as to whether the elk will move outside the park in sufficient numbers and whether adequate numbers of hunters will participate and be successful. If these conditions cannot be met, the park will adjust its management action in one of two ways. If conditions cannot be met during the initial reduction phase, then the park will use initial reduction actions described in Alternative C, thus allowing it to meet its population objectives while still being able to utilize any available meat. If conditions cannot be maintained during the maintenance phase of the plan, the park will implement maintenance actions described in Alternative D.

If the preferred alternative is implemented in the fall of 2009, the population of elk using the park would be approximately 815, based on the current numbers of about 650. Under the preferred alternative, it would take 4 years to get into the range of 232-475 animals using the park and 6 years to reduce the population of elk using the park to the target of 232 (low end of the range) and allow the population to begin fluctuating on its own. If, however, after the second year, the population of elk using the park is not within 5% +/- 482 animals, the population would not be reducing at a rate fast enough to reach planned population goals. Therefore, park management could move to alternative C.

Once the monitoring program has been initiated and key data collected, the data would be evaluated and interpreted to determine if a change in management direction would be needed, based on the management objectives. This would be done as Park staff evaluates the data, based on the carrying capacity of the Park (i.e., AUMs) to guide the decision. Park staff would be charged with refining evaluation thresholds/criteria, assessing whether the data indicate that some thresholds have been exceeded or that biological integrity of the system is being compromised and deciding if a change in management actions is necessary. At this point in time, a formal decision support model has not been developed for use in this proposed monitoring plan; rather, the following outlines a decision support framework, or decision protocol, that has been developed to provide for a consistent, integrated interpretation of the data, using the best science available. The interpretation would drive future adaptive management decisions, as indicated in figure 2.

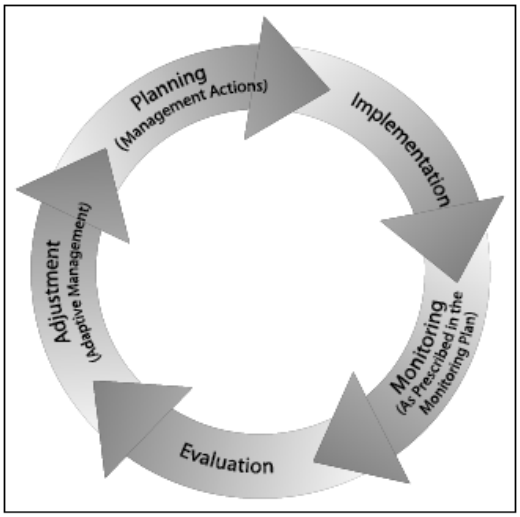

FIGURE 2. ADAPTIVE MANAGEMENT DECISIONS

Integral to the adaptive management component of the framework, is continued monitoring and evaluation, as needed, to ensure the management objectives for the Park are being met.

A. Framework for Decisions

The basic framework would initially involve park staff examining the biological indicators (the key data categories discussed above) to evaluate the condition of the park carrying capacity (the "observed"), relative to a selected baseline (the "expected"). Park staff would examine all the key data or indicator values that would be monitored. Staff would interpret the suite of data as a whole, examining the indicator values, the amount of difference between "observed" and "expected" values, and the interdependence among various factors to evaluate park carrying capacity and wildlife population levels.

In general, the "expected" baseline would consist of similar data from reference sites – derived from areas of the same or similar class. General park sites would be assigned based on work performed through the NRCS Technical Guides for the Black Hills (NRCS 1997). As previously stated, the first level of classification divided the park into range sites and grazeable woodland sites. The second level of classification, representing smaller variations in ecological habitat, would also be considered by examining each site in four different seral stage conditions (early, early intermediate, late intermediate, late), and three levels of canopy closure (sparse, medium, dense).

Data from each site could also be compared with the baseline conditions of the site, or previously obtained monitoring results, to see what changes have occurred at the site over time. Using this as a baseline would not imply that this would serve as the desired condition for the site. It would, however, provide a baseline from which it would be possible to determine if application of the management actions are resulting in the desired change and the conditions at the site are moving in the desired direction (in other words, is the observed change meeting the management objectives?).

If the observed change (such as reduction in an individual species density and reestablishment of indicator taxa) is meeting management objectives, management actions for the Park would not be changed. If, however, there has been no change or a significant change from the expected/desired value, and this cannot be explained by variables other than wildlife population and forage utilization, a change in the management action would be indicated. Figure 3 provides an illustration of the basic decision framework.

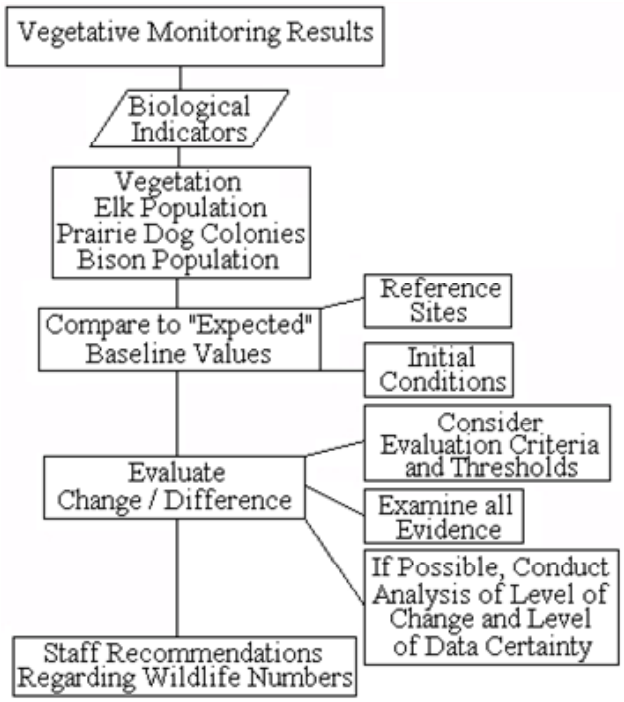

FIGURE 3. BASIC DECISION FRAMEWORK

B. Evaluation Thresholds

Absent a formal model, Park staff would be charged with evaluating the levels of change and their implication for wildlife population management. The actual thresholds/criteria for each range site cannot be defined at this time but would be defined initially by Park staff based on previously collected data. Thresholds for each data type would include the actual measurements/observations plus the associated data variability. The thresholds would be refined by Park staff as the monitoring program progresses. Park trends, as monitored in reference sites, would be factored into all management decisions. Any changes in wildlife management would require consideration of all appropriate data in a line-of-evidence approach.

If the data for a parameter are qualitative, the observed changes would be classified as minor, moderate, or major and considered in conjunction with the quantifiable data.

Results of the annual monitoring of the park's forage would be used to adjust the number of elk to be removed the following year. Several examples follow as to how the adaptive management approach could be implemented based on different outcomes:

a) If forage regeneration occurs prior to meeting the initial elk population goal, the elk population goal would be adjusted upward to the density that would still allow regeneration to occur.

b) If no response in forage regeneration occurs within three years after the initial elk population goal was reached, the elk population goal could be lowered further.

c) If the initial elk population goal was not reached within 2 years, additional efforts would be made to reach the desired population through the use of other reduction methods described in the plan.

V. REFERENCES

Natural Resource Conservation Service

1997 National Range and Pasture Handbook. Chapter 4, Inventory and Monitoring Grazing Resources. United States Department of Agriculture. Natural Resources Conservation Service.

ATTACHMENT 1: SURVEY PROTOCOLS

The categories listed below cover data categories that must be collected in the field.

Vegetative Surveys

Estimating and harvesting (double sampling) (NRCS 1997)

The double-sampling method is to be used in making most production and composition determinations. The procedure is:

- Select a study area consisting of one soil taxonomic unit. This should be a benchmark soil or taxonomic unit that is an important component of a rangeland ecological site or forest land ecological site.
- Select plots to be examined at random.
- The number of plots selected depends on the purpose for which the estimates are to be used, uniformity of the vegetation, and other factors. A minimum of 10 plots should be selected for all data to be used in determining rangeland ecological sites or other interpretive groupings and for data for use in the Ecological Site Information System. If vegetation distribution is very irregular and 10 plots will not give an adequate sampling, 20 plots can be selected. Fewer than 10 plots can be used if data are to be used for planning or application work with landowners, but the data should not be entered in the Ecological Site Information System.
- Adapt size and shape of plots to the kind of plant cover to be sampled. Plots can be circular, square, or rectangular. The area of a plot can be expressed in square feet, in acres, or in square meters.

If vegetation is relatively short and plot markers can be easily placed, 1.92-, 2.40-, 4.80-, and 9.60-square-foot plots are well suited to use in determining production in pounds per acre. The 9.6- square-foot plot is generally used in areas where vegetation density and production are relatively light. The smaller plots, especially the 1.92-square-foot plot, are satisfactory in areas of homogeneous, relatively dense vegetation like that occurring in meadows and throughout the plains and prairie regions. Plots larger than 9.6 square feet should be used where vegetation is very sparse and heterogeneous.

If the vegetation consists of trees or large shrubs, larger plots must be used. If the tree or shrub cover is uniform, a 66- by 66-foot plot of 0.1 acre is suitable. If vegetation is unevenly spaced, a more accurate sample can be obtained by using a 0.1-acre plot, 4.356 feet wide and 1,000 feet long. For statistical analyses, 10 plots of 0.01 acre are superior to a single 0.1 acre plot.

If vegetation is mixed, two sizes of plots generally are needed. A series of 10 square or rectangular plots of 0.01 acre and a smaller plot, such as the 9.6-square-foot plot nested in a designated corner of each larger plot, is suitable. The 0.01- acre plot is used for trees or large shrubs, and the smaller plot for lower growing plants. Weights of the vegetation from both plots are then converted to pounds per acre.

Plots with area expressed in square meters are used if production is to be determined in kilograms per hectare. If the plots are nested, production from both plots must be recorded in the same units of measure. For example, a plot 20 meters by 20 meters (or other dimensions that equal 400 meters) can be used for measuring the tree and shrub vegetation and a 1-meter plot nested in a designated corner can be used for measuring the low-growing plants. Determine the production from both in grams and convert the grams to kilograms per hectare. Plots of 0.25, 1, 10, 100, and 400 square meters are commonly used.

After plots are selected, estimate and record the weight of each species in each plot using the weight-unit method. When estimating or harvesting plants, include all parts of plants whose stems originate in the plot, including all aboveground parts that extend beyond a plot boundary. Exclude all parts of herbaceous plants and shrubs whose stems originate outside a plot, even though their foliage may overlap into the plot.

After weights have been estimated on all plots, select the plots to be harvested. The plots selected should include all or most of the species in the estimated plots. If an important species occurs on some of the estimated plots, but not on the harvested plots, it can be clipped individually on one or more plots. The number of plots harvested depends on the number estimated. To adequately correct the estimates, research indicates at least one plot should be harvested for each seven estimated. At least 2 plots are to be harvested if 10 are estimated, and 3 are to be harvested if 20 are estimated.

Harvest, weigh, and record the weight of each species in the plots selected for harvesting. Harvest all herbaceous plants originating in the plot at ground level. Harvest all current leaf, twig, and fruit production of woody plants originating in the plots. If harvesting forage production only, then harvest to a height of 4.5 feet above the ground on forest land sites.

Correct estimated weights by dividing the harvested weight of each species by the estimated weight for the corresponding species on the harvested plots. This factor is used to correct the estimates for that species in each plot. A factor of more than 1.0 indicates that the estimate is too low. A factor lower than 1.0 indicates that the estimate is too high.

After plots are estimated and harvested and correction factors for estimates computed, air-dry percentages are determined by air-drying the harvested materials or by selecting the appropriate factor from an air-dry percentage table (see exhibit 4–2). Values for each species are then corrected to air-dry pounds per acre or kilograms per hectare for all plots. Average weight and percentage composition can then be computed for the sample area.

Harvesting

This method is similar to the double-sampling method except that all plots are harvested. The double-sampling procedures for estimating weight by species and the subsequent correction of estimates do not apply. If the harvesting method is used, selection and harvest of plots and conversion of harvested weight to air-dry pounds per acre or kilograms per hectare are performed according to the procedures described for double sampling.

Units of production and conversion factors

All production data are to be expressed as air-dry weight in pounds per acre (lb/acre) or in kilograms per hectare (kg/ha). The field weight must be converted to air-dry weight. This may require drying or the use of locally developed conversion tables.

Converting weight to pounds per acre or kilograms per hectare—The weight of vegetation on plots measured in square feet or in acres can be estimated and harvested in grams or in pounds, but weight is generally expressed in grams. To convert grams per plot to pounds per acre, use the following conversions:

1.92 ft^2 plots—multiply grams by 50
2.40 ft^2 plots—multiply grams by 40
4.80 ft^2 plots—multiply grams by 20
9.60 ft^2 plots—multiply grams by 10
96.0 ft^2 plots—multiply grams by 1

In the metric system, a square-meter plot (or multiple thereof) is used. Weight on these plots is estimated or harvested in grams and converted to kilograms per hectare. A hectare equals 10,000 square meters. A kilogram equals 1,000 grams. To convert grams per plot to kilograms per hectare, use the following conversions:

0.25 m^2 plots—multiply grams by 40
1 m^2 plots—multiply grams by 10
10 m^2 plots—multiply grams by 1
100 m^2 plots—multiply grams by 0.10
400 m^2 plots—multiply grams by 0.025

When assisting landowners and operators in determining approximate production, express data in pounds per acre. Use the following factors to convert from one system to another:

To convert	To	Multiply by
Metric units:		
Kilograms per hectare	Pounds per acre	0.891
Kilograms	Pounds	2.2046
Hectares	Acres	2.471
English units:		
Pounds per acre	Kilograms per hectare	1.12
Pounds	Kilograms	0.4536
Acres	Hectares	0.4047

Converting green weight to air-dry weight—If exact production figures are needed or if air-dry weight percentage figures have not been previously determined and included in tables, retain and dry enough samples or harvested material to determine air-dry weight percentages. The percentage of total weight that is air-dry weight for various types of plants at different stages of growth is provided in exhibit 4–2. These percentages are based on currently available data and are intended for interim use. As additional data from research and field evaluations become available, these figures will be revised. Air-dry weight percentages listed in the exhibit can be used for other species having growth characteristics similar to those of the species listed in the exhibit. States that have prepared their own tables of air-dry percentages on the basis of actual field experience can substitute them for the tables in exhibit 4–2. Local conservationists are encouraged to develop these tables for local conditions and species. Some interpolation must be done in the field to determine air-dry percentages for growth stages other than those listed.

The relationship of green weight of air-dry weight varies according to such factors as exposure, amount of shading, time since last rain, and unseasonable dry periods. Several samples of plant material should be harvested and air-dried each season to verify the factors shown or to establish factors for local use.

Wildlife Surveys

Elk census. Aerial surveys can be used to estimate the number of over-wintering elk by counting all elk observed. This is not intended to get an actual count of all animals, as this is impractical. However, it is intended to obtain an estimate of the number of elk within the Park. These are usually conducted between January and March when there is snow cover on the ground to aid in spotting elk from the air. In addition, ground counting of elk may also supplement population estimates. This method is not as accurate as aerial methods, as animals move and it is difficult to get people into all parts of the Park simultaneously to cover animal movement from one area to another.

Bison census. Aerial survey can be used to estimate the number of bison within the Park. Again, with the improbability of counting every bison within the Park, this is intended to obtain an estimate of the number of bison within the Park. The most opportune time to do this is in conjunction with bison roundups, as helicopters are available and it is only necessary to count the bison that have not been captured. With captured bison contained in the corral facility, a count of the remaining animals in the park is easily facilitated thereby giving the park a total count of bison within the park boundaries.

Prairie dog colony census.

- Delineation of the prairie dog colony edge is an exercise in creating an artificial margin along a disturbed gradient. Therefore, consistency and precision must be balanced with **practicality** and **common sense**.

- On larger colonies, or colonies where the edge can not easily be identified, colored flags can be used to mark the edge of the colony before conducting the GPS mapping.
- If using the GeoExplorer 3 GPS units, use the “Prairie Dog Colony” Data Dictionary to collect data. If the colony can easily be GPS’d during a single session, and continuity is obvious, you may select the “Colony Polygon” as your feature. If the town is quite large, or the edges are not easily discernable, you may use the “Colony Line” feature. By using the “Colony Line” feature, you can stop and close the file at any time. Just be sure to begin a new file where you left off with the first file. The GIS Specialist can then connect all line segment files, and the area can be calculated.
- Select a starting point with a flag and begin walking the colony edge in either direction.
- Utilize the following criteria to delineate the colony edge: a) Visually identify the dominant vegetation clip line when present; b) when continuity of a vegetation clip line falters, is not apparent or cannot be reasonably determined, continue to encircle the colony with an imaginary line which incorporates the extent of active burrows (fresh scat within 0.5 meters of burrow) within five meters of actively grazed prairie dog colony. There may be exploratory burrows at a great distance from the main colony, but burrows > 5 meters should be excised, if they appear to be “outliers”; otherwise extensive areas of un-colonized grassland could be included. Include all clip line and all active burrows < 5 meters outside clip line (see figure 1).
- If there are major undulating changes in the perimeter of the colony polygon, place colored flags approximately 10 meters apart, which will clearly delineate these changes. This can be done while walking the colony edge.

- Completely walk the entire colony edge, arriving back to the initial flag, thus closing the colony polygon.

Because of time and personnel constraints, the Park is examining other methods to map active prairie dog colonies by using aerial photography or satellite imagery and comparing the results with on-the-ground sampling. Alternative methods of estimating prairie dog colonies remotely, that provide statistically comparable data to ground mapping, may be utilized in place of current methods.

References

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2003 National Range and Pasture Handbook. Chapter 4, Inventory and Monitoring Grazing Resources. United States Department of Agriculture. Natural Resources Conservation Service.

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2001 Black-tailed Prairie Dog Monitoring Protocol for Seven Prairie Parks. Northern Prairie Wildlife Research Center Inventory and Monitoring Protocol. U.S.Department of theInterior. U.S. Geological Survey.

APPENDIX D

Cost Assumptions

COST ESTIMATE FOR ALTERNATIVES B, C AND D

Alternative B. Hunting Outside the Park+

- $150,000-$170,000 to raise fence; 4-5 month process
- $12,000 to construct/install 12 gates
- Hazing about $3000/year for initial reduction and maintenance
- At 4 years the cost would be $174,000 (using $150,000), while at 6 years the cost would be $180,000.

Alternative C. Roundup and Live Shipment or Slaughter*

- Roundup charges are based on the need of 2 helicopters at $800/hour for approximately 5 days. This is 8 hours X $800/hour X 5 days X 2 helicopters = $64,000/year or $128,000. Maintenance costs would be approximately the same for a single year.
- Personnel costs (based on a mid-level GS-07) would require 30 people for 5 days, or 30 people X $30/hr X 40 hours = $36,000 X 2 years = $72,000 for the roundup. Maintenance costs would approximate the single year cost.
- If a partner is found:

a) One processing facility quoted a price of $45/animal to grind into hamburger. These would be processed in lots of 10 animals to allow for smaller amounts of loss given the possibility of CWD positives. Facility reps also recommend not dealing with calves because of the small amount of meat obtained for the work/cost. If 300 animals were to be removed from the park each year, and assuming a sex ratio of 1:1.8 and 2007 cow/calf numbers, then 3 of every 16 animals is a calf. That means that 56 of every 300 animals destroyed would be calves. In other words, only 244 bulls/cows need be shipped to reach the 300 animals processed in a year. With that, the cost would be 244 animals X $45/animal = $10,980/year or @$22,000 for the 2 years. There may be a cost for killing and disposal of calves that is not factored in.
b) Pot-bellied trucks could hold 100-110 cows and 60-80 bulls. At the time of these quotes, the standard trucking rate was $3.30/mile. Bridgewater Meats is 370 miles from Wind Cave National Park, equating to an approximate 750 mile trip/truck, or $2,475/truck. For 300 animals to be processed each year it would take 3 trucks or $7,425/year or $14,850 for the 2 years.
c) No cost estimates are available for distributing meat to willing takers.
d) Maintenance costs at 28 animals/year would be 28 animals X $45/animal = $1,260 for processing and a single truck transportation costs of approximately $2,475 totaling $3,735/year.

- If no partner is found:

a) The largest incinerator (S-327) burning wood can burn 8 tons per hour. It is recommended that when burning elk, a ratio of 1:1 is maintained with wood, which would reduce the burning to 4 tons of elk burned per hour. If we estimate the average animal at 500 pounds, then 16 elk could be burned per hour or 128 animals in an 8 hour day. The largest burner cost was $115,000 and the smaller burner (S-220) is $80.000 and burns approximately half the

amount of the larger. This does not take into account the wood needed for burning, but with the amount of USFS forest thinning done in the area, an agreement to use slash for burning would be no problem. A minimum cost could be assumed at $500/year. Assuming the larger burner is used, approximately 3 days of burning would be required. Personnel costs would include a loader operator/burner (to load the burner with wood and carcasses and keep the process going). Based on previous estimates of $30/hr, this would be 3 days X 8 hours X $30/hr = $720 over 2 years for a minimum of $1,440. The total cost for incineration would be $115,000 for the incinerator, $500/year for wood, and the personnel time of $720/year. The S-220 would burn about 1/2 that amount and personnel costs would double.

b) Fees at a typical landfill are charged by the ton (2006=$39 per ton / 2007=$43 per ton / 2008=$47 per ton). Other Fees = annual fee $10. Again, assuming each animal weighs 500 lbs, the cost would be 300 animals X 500 lbs/animal / 2000/ton X $47 + $10.40 = $3,535 in 2008 and 300 animals X 500 lbs/animal / 2000/ton X $51/year = $3,825 or $7,360 for 2 years.

c) Maintenance costs for incineration would equate to 1 day of burning X $30/hour wages = $240/year for incineration. Maintenance costs for landfill would be for approximately 7 tons of carcasses X $57/ton = $399.

- At 2 years the cost to complete initial reduction if meat were donated would be $236,850, no donation with incineration of carcasses would be approximately $316,940, and no donation with landfill of carcasses would approximately $207,360.
- Maintenance would be $103,735/year if meat were donated, $100,240 for incineration, and $100,399 for landfill.

Alternative D. Sharpshooting[+]

- For the first 3 years approximately 200 elk would need to be removed and the 4th year only 52 elk would be removed. Assuming $400/elk to shoot (based on APHIS $550/elk which includes transport out) would amount to 200 elk shot X $400/elk = $80,000/year for 3 years and 52 elk shot X $400/elk = $20,800 for the 4th year for initial reduction.
- Helicopter to sling load carcasses $1,000/hour. If it took the full 8 days to shoot and remove the 200 elk the cost would be 8 days X 8 hours X $1,000/hour = $64,000/year for the first 3 years and 2 days X 8 hours X $1,000 = $16,000 for the 4th year, totaling $208,000 for initial reduction.
- Incineration and landfill costs would be the same as those quoted for Alternative C. Hence, incineration of the carcasses would cost approximately $1,220/year and landfill would cost approximately $399/year.
- Cost for population reduction would be $472,880 if carcasses were incinerated and $469,596 if carcasses were landfilled.
- At the population target of 232 and 28 animals to remove/year for maintenance, the cost would be $400/animal X 28 animals shot = $11,200. The carcasses would be left in on the ground at that point.

[*]email message forwarded to Kathy Joyner by Dan Roddy on 7/18/2006, prepared by Dan Foster
[+]cost assumptions from 11/6-7/2007 meeting at Wind Cave National Park

APPENDIX E

Elk and Deer Meat from Areas Affected by Chronic Wasting Disease: A Guide to Donation for Human Consumption, National Park Service Public Health Program, May 2006

NPS Office of Public Health
Visitor and Resource Protection Directorate

National Park Service
U.S. Department of the Interior

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Assistance with this report was provided by:
Food and Drug Administration, U.S. Department of Health and Human Services
Food Safety and Inspection Service, U.S. Department of Agriculture
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BACKGROUND

The National Park Service Biological Resources Management Division (BRMD) has submitted a request to the National Park Service Public Health Program (PHP) for the development of guidance regarding the human consumption of elk and deer meat gathered from Parks in areas affected by chronic wasting disease (CWD). Several parks are facing decisions on what options to use if they decide to use lethal culling techniques to manage their cervid herds. Using the meat for human consumption is one of the alternatives being considered by Parks. Therefore, there is a need for consistent NPS guidance regarding the use of cervid meat for human consumption from areas affected by CWD. This document is meant to be a brief overview of the issues surrounding CWD as it relates to public health, and a summary of the PHP recommendations.

Chronic wasting disease belongs to a group of diseases known as transmissible spongiform encephalopathies (TSE's), which includes scrapie, bovine spongiform encephalopathy (BSE), and Cruetzfeldt-Jakob disease (CJD). TSE's cause distinctive lesions in the brain and consistently result in death. The history, details, and theories of infectivity of CWD are well chronicled in many of the references at the end of this document, and therefore will not be included in this discussion.

PUBLIC HEALTH RISK

Current research consensus indicates that the health risk for human's that consume elk and deer infected with CWD if any, is extremely low. Based on analysis of existing epidemiologic and laboratory studies, there is currently no established link between CWD and similar human TSE diseases. However, current literature reviewed by the PHP and subject area experts contacted during the preparation of this document, agree that there is still more to be learned and that many questions remain unanswered about the transmissibility of CWD to humans.

A related animal disease, bovine spongiform encephalopathy (BSE), has been causally linked to the human form of that disease known as variant Creutzfeldt-Jakob disease (vCJD). This has raised new concerns about the possibility of CWD crossing the species barrier and infecting humans that consume meat from infected elk and deer (1). While current evidence indicates that the differences between BSE/vCJD and CWD are significant, there is still ongoing research to establish whether CWD can cross the human species barrier. Given the early state of our knowledge about this issue, many subject area

researchers and public health authorities believe that it is wise to take some basic precautions to protect human health when eating meat from deer or elk that come from areas known to have CWD (1).

Laboratory studies characterizing the molecular similarities between the agents of BSE and vCJD were critical in establishing a link between the two diseases. Similar studies on CWD and human TSE cases have been completed, and have not found the same strong evidence establishing a link between CWD and human TSE's (1). One in-vitro, cell free, conversion reaction study showed that there may be a molecular barrier that limits human susceptibility to CWD (5). While human prions were susceptible to conversion to the abnormal CWD prion, the efficiency of conversion was >14 fold lower than the conversion of the normal cervid prion and >5 fold weaker than the conversion of human prions that was induced by CJD prions. While this study indicates that CWD prion induced conversion of human prions is possible in-vitro and in a cell free situation, it does seem to indicate that there is a molecular level barrier for humans against infection with CWD. Current studies using transgenic mice that express human and cervid prion proteins may prove very helpful in further assessing the potential for CWD to infect humans (1).

Epidemiologic studies have explored the possibility of a link between consumption of deer or elk meat from CWD endemic areas and clusters of human cases of CJD or other TSE's (1). Twelve different human cases of CJD have been investigated for a possible causal link with CWD of deer or elk (1). In none of these cases was the human TSE causally linked to consumption of deer or elk meat from CWD endemic areas. In all cases, the agents causing the human case of CJD was molecularly characterized as an agent distinctly different than the CWD infectious agent. Additionally, the rate of human CJD cases in the CWD historic areas (NE Colorado and SE Wyoming) where people have presumably been exposed to consumption of CWD positive animals for decades is not higher than the national average of ~1 case per 1,000,000 (1). Current epidemiology studies are set to track occurrence of human prion disease among persons with increased risk of exposure to CWD infected cervid meat. Because of the long and somewhat uncertain incubation periods of prion diseases, epidemiologic studies that definitively prove or disprove a link between CWD and human TSE's may take years to be completed. Due to this area of uncertainty, potential exposure to the CWD agent should be minimized through following the recommendations of the public health community (1).

A recently published study clearly demonstrated the presence of CWD prions in skeletal muscle of CWD infected mule deer (9). The study demonstrated an increased risk of human exposure to the prion; however it did not indicate an increased risk/ability of the CWD prion to cause human disease. The ability (or lack of ability) of the CWD prion to cause human disease is still not well defined, and there is still no evidence that CWD has ever caused human disease. Therefore, CWD's ability or lack of ability to cause human disease still needs to be defined before the public health significance of this study can be determined. While the results of the study are a significant addition to our body of knowledge, at this time it does not by itself indicate an increased risk to human health. New knowledge contributed by this study is simply that humans who handle or consume meat from deer in advanced stages of CWD are probably exposed to the CWD prion. Additionally, it should be noted that the study did not include a treatment group of CWD positive deer that were still symptom free and healthy appearing. Therefore, it is still unclear if healthy appearing animals that are CWD positive would have prions present in skeletal muscle at any level.

MINIMIZING HUMAN EXPOSURE TO THE CWD AGENT

While many public health officials and agencies have made recommendations on the practice of consuming elk and deer from CWD endemic areas, the Centers for Disease Control and Prevention (CDC), in their journal Emerging Infectious Diseases, has recently published the most complete and up to date summary of recommendations. The recommendations for hunters in areas where CWD occurs are as follows.

- Follow advice given by public health and wildlife agencies
- Avoid eating meat from deer and elk that look sick or test positive for CWD
- Wear gloves when field dressing carcasses
- Bone out the meat from the animal
- Minimize handling of brain and spinal cord tissues
- Avoid eating specific deer and elk tissues, which are known to harbor high levels of the CWD agent (e.g., brain, spinal cord, eyes, spleen, tonsils, and lymph nodes).

CWD POLICIES OF COLORADO, WYOMING AND WISCONSIN

Colorado, Wyoming, and Wisconsin have all dealt extensively with issues related to the management of CWD and possible human health problems related to CWD. All three states have official CWD management plans. Their approaches to managing the disease in the deer and elk herds differ, but all three have taken a similar approach to managing the issue of human consumption of meat from CWD animals.

Based on recommendations of the CDC, World Health Organization, and their own TSE experts, the states have adopted a philosophy of "informed consent" with respect to human consumption. Hunters in areas with endemic CWD are given information about the disease, informed of the option to have their deer or elk carcasses tested and advised not to consume the meat until results are obtained. They are also advised not to eat any animals that test positive for CWD.

Additionally, each of the three states has policies allowing the donation of meat from animals harvested in CWD endemic areas. Wisconsin, due to attempts to eradicate CWD in their endemic areas is trying to reduce the overall population of deer by encouraging hunters to harvest more animals. Due to hunters not wanting to waste the meat, Wisconsin has actually established a "Venison Donation Program" whereby hunters can donate the meat which is given to participating food pantries. Wyoming also has a policy formally written into their CWD Management Plan allowing donation of deer and elk carcasses obtained from CWD endemic areas to individuals. Wyoming's policy does not allow donation to organizations or entities for redistribution. Authorities from Colorado indicate that the state does donate elk and deer from known CWD areas for human consumption. All three states' policies require that carcasses test negative for CWD before donation for human consumption.

NPS PUBLIC HEALTH PROGRAM RECOMMENDATIONS

DIFFERENT SITUATIONS

The PHP recognizes two broad categories under which a park may face the issue of human consumption of cervid meat. Parks may choose to use controlled NPS culling followed by donation of meat; or they may choose to use some form of public hunt to manage cervid herds. There are some important distinctions between these two methods in the details of managing the public health aspects of human consumption of the meat. Therefore, the following Suggested Guidelines section is broken into four separate sections. Any park referring to these guidelines should be careful to use the section that applies the park's specific situation. Additionally, it is possible that a specific situation may not clearly fall into one set of guidelines, in which case the PHP would be available to assist in making a case by case decision.

Since there is currently no scientific evidence linking the consumption of meat from deer or elk in areas with historic CWD to human disease, the PHP finds no compelling reason based on the current scientific literature to prohibit the practice of donating meat from these animals. A link between CWD and human disease has neither been proved nor disproved. In this situation, and given the current state of our knowledge about this issue, it is appropriate for NPS to use an abundance of caution when approaching this issue.

While the policy of testing each carcass for CWD before donation makes good common sense, it is important to note that the CWD tests are not sensitive enough to be thought of as a "food safety test", i.e. a negative result does not guarantee that the animal does not have CWD. Animals in the earlier stages of infection may not test positive (8). This is especially true for elk.

Due to the uncertainty about CWD's potential to impact human health we recommend that should any park within 60 miles of a known CWD case decide to cull and donate meat or use public hunts, NPS actively ensures a process of gaining "informed consent." Wherever possible, NPS should maintain direct control over the education and consent process. The PHP does not recommend leaving the informed consent process to a third party such as a food pantry or soup kitchen. It may be possible to work with such entities to ensure that people choosing to consume this meat are properly informed. An additional, but ethical rather than public health question is whether it is acceptable to offer this meat to people who might feel economic pressure to consume it even if they would prefer not to.

DEFINITION OF AN AREA AFFECTED BY CWD FOR MEAT DONATION

For the purposes of this guidance on use of meat for human consumption, an Area Affected by CWD can be any one of the following general categories:

- Any park unit that falls within a geographical area in which CWD is historically known to occur, or within an area declared "endemic" by local, state, or federal authorities (see Guidance Section 1) AND/OR;
- Any park unit within 60 miles of a confirmed positive case of CWD in either free-ranging or captive cervids (see Guidance Section 2) AND/OR;
- Any park unit participating in CWD surveillance testing of animals when meat from the animals in the herd will be made available for human consumption regardless of historic range, regardless of "endemic" status, or regardless of distance from any confirmed positive CWD cases (see Guidance Section 2) AND/OR;
- Any park unit allowing public hunting of cervids AND that falls into category 1 or 2(see Guidance Section 4).

Note: Throughout this guidance document, the NPS Public Health Program has attempted to provide some general advice on CWD and human consumption of meats. However, on an emerging issue such as this, where the science is young and there are still significant unknowns, written guidance that addresses all variables is problematic at best.

Individual situations will vary widely and any park unit faced with this issue is strongly encouraged to consult with the PHP so that we may jointly determine the level of control and informed consent that is appropriate for each unique situation

REMOVAL OF "AREA AFFECTED BY CWD" STATUS

The PHP recognizes that with an emerging disease such as CWD the science and subsequent recommendations for minimizing public health risks may change. Therefore, PHP recommends that all parks considering donation of cervid meat follow the Public Health Guidance. Changes between general "AREA AFFECTED" categories and exemptions from guidance will be considered on a case by case basis and will be based on:

- Level of CWD surveillance sampling.
- Time since last detected case of CWD in the vicinity of the park.
- Pertinent scientific findings.
- Submission to the BRMD and the PHP any supporting scientific evidence that the park feels is pertinent to their unique situation.
- BRMD and the PHP will jointly consider each request and render an opinion.

GUIDANCE SECTION 1

DONATION OF ELK OR DEER MEAT GATHERED FROM AREAS WHERE CWD IS KNOWN TO OCCUR

Section 1 guidance is intended for park units falling within category #1 of the Definition of an Area Affected by CWD.

The PHP would like to be notified of the park's intentions to cull herds and donate meat before it takes place.

DONATION

- No obviously sick, emaciated or otherwise unhealthy appearing animals should be donated for human consumption.
- Only animals that appear completely healthy should be considered for donation.
- All harvested animals should be tested CWD negative before the meat is considered for donation.
- Meat will not be donated to food pantries, soup kitchens or any entity that intends to redistribute the product.
- Meat will only be donated to individuals from whom informed consent can be clearly obtained.
- All donated meat should be processed and packaged in a state or USDA approved and licensed meat processing plant that processes all cuts according to state or USDA/FSIS recommendations to reduce risk of exposure to the CWD agent.

HANDLING IN THE FIELD

- Guidelines published by the appropriate state wildlife management departments for field dressing procedures and carcass handling to minimize exposure to CWD infectious material should be followed at all times.

- Sanitary conditions should be maintained throughout the process from the time of kill through field dressing and transport.
- Positive carcass identification linked to the CWD sample associated with that carcass must be established at the time of kill, and maintained throughout transport, storage, processing and donation.
- All carcasses and carcass parts, whether donated or not, should be transported according to all state and federal laws and regulations regarding transport of elk or deer carcasses and parts from areas with known CWD.
- Any carcasses to be disposed of in a landfill should be disposed of in accordance with all local, state, and federal laws and regulations regarding disposal of such carcasses or carcass parts from areas with known CWD.

The PHP is available for consultation on how to help maintain sanitary conditions during field dressing and carcass transport.

PROCESSING AND DISTRIBUTION

- Parks should work closely with appropriate state or local officials to ensure compliance with all state laws and regulations regarding donation of wild game meat.
- Ideally, carcasses should not be processed into edible meat cuts until final CWD testing results are obtained. If this is not practical, each batch of carcasses processed should retain clear batch identification until CWD test results are available. Batch records should include all individual carcass identifications that comprise the complete batch. A batch is defined as all carcasses that are processed into edible cuts between complete processing equipment cleaning and sanitizing.
- All donated meat should be held under the park's or meat processor's direct control until final CWD test results are obtained and the meat is cleared for consumption.
- A positive CWD test for any animal in a batch should result in the entire batch of processed meat or carcasses being appropriately disposed of according to state and federal laws regarding disposal of such meat or carcasses.
- Meat should only be donated to individuals after informed consent has been obtained.

GUIDANCE SECTION 2

DONATION OF ELK OR DEER MEAT GATHERED FROM AREAS WITHIN 60 MILES OF A KNOWN CWD CASE

Section 2 guidance is intended for park units falling within category 2 of the Definition of an Area Affected by CWD.

The PHP would like to be notified of the park's intentions to cull herds and donate meat before it takes place.

DONATION

- No obviously sick, emaciated or otherwise unhealthy appearing animals should be donated for human consumption.
- Only animals that appear completely healthy should be considered for donation.
- A baseline estimate of the likelihood of CWD presence within the herd should be established (i.e. 99% confident that CWD is not present at more than 1% prevalence within the herd.)
- All animals that are tested for CWD as part of any surveillance program should have negative test results before the carcasses or meat of that animal are considered for donation. Additionally, it is strongly recommended that no meat or carcasses from a given culling batch be donated for human consumption until negative test results are obtained from those animals that are sampled for testing.
- Meat should only be donated to individuals from whom informed consent can be clearly obtained.
- After consultation with the PHP and BRMD programs, donation to food pantries, soup kitchens or other 3rd party entities that intend to redistribute the product can be considered, providing a clear and confirmable mechanism for gaining informed consent from the FINAL consumer is in place, AND initial CWD testing suggests with a high degree of confidence that CWD is not present within the population (99% confidence that CWD prevalence is <1%).
- All meat that is donated in processed and packaged form should be processed and packaged in a state or USDA approved and licensed meat processing plant that processes all cuts according to state or USDA/FSIS recommendations to reduce risk of exposure to the CWD agent.

HANDLING IN THE FIELD

- Guidelines published by the appropriate state wildlife management departments for field dressing procedures and carcass handling to minimize exposure to CWD infectious material should be followed at all times.
- Sanitary conditions should be maintained throughout the process from the time of kill through field dressing and transport.
- Positive carcass identification linked to the CWD sample associated with that carcass must be established and maintained from the time of kill, transport, storage, and processing.
- All carcasses and carcass parts, whether donated or not, should be transported according to all state and federal laws and regulations regarding transport of elk or deer carcasses and parts from areas with known CWD.
- Any carcasses to be disposed of in a landfill should be disposed of in accordance with all local, state, and federal laws and regulations regarding disposal of such carcasses or carcass parts from areas with known CWD.

The PHP is available for consultation on how to help maintain sanitary conditions during field dressing and carcass transport.

PROCESSING AND DISTRIBUTION

- Parks should work closely with appropriate state or local officials to ensure compliance with all state laws and regulations regarding donation of wild game meat.
- Ideally, carcasses should not be processed into edible meat cuts until final CWD testing results are obtained. If this is not practical, each batch of carcasses processed should retain clear batch identification until CWD test results are available. Batch records should include all individual carcass identifications that comprise the complete batch. A batch is defined as all carcasses that are processed into edible cuts between complete processing equipment cleaning and sanitizing.
- All donated meat should be held under the park's or meat processor's direct control until results of CWD testing are obtained and the meat is cleared for consumption.
- Meat should only be donated to individuals after informed consent has been obtained.
- A positive CWD test for any animal in a batch should result in the entire batch of processed meat or carcasses being appropriately disposed of according to state and federal laws and regulations regarding disposal of such carcasses/meat. Additionally, any positive CWD test moves the park into GUIDANCE SECTION 1.

GUIDANCE SECTION 3

DONATION OF ELK OR DEER MEAT GATHERED FROM AREAS OUTSIDE 60 MILES OF A KNOWN CWD CASE

Section 3 guidance is intended for park units falling within category 3 of the Definition of an Area Affected by CWD.

The PHP would like to be notified of the park's intentions to cull herds and donate meat before it takes place.

DONATION

- No obviously sick, emaciated or otherwise unhealthy appearing animals should be donated for human consumption.
- Only animals that appear completely healthy should be considered for donation.
- If limited or no CWD surveillance has been performed in the herd:
  a) All cervids that are tested for CWD as part of any surveillance program should have negative test results before the carcass or meat of that animal is considered for donation.
  b) It is recommended that no meat or carcasses from a given culling batch be donated for human consumption until negative test results are obtained from those animals that are sampled for testing.

1. If CWD surveillance data are available from the herd:
   a) Depending on the quantity and quality of available surveillance data and the level of confidence that CWD does not exist in the herd, donation of meat prior to receiving results of CWD testing may be considered by the park after consultation with the PHP and BRMD programs.

b) If a carcass or meat is donated for human consumption prior to return of CWD test results, informed consent (including a recommendation not to consume meat from the carcass until a negative test result has been reported) should be obtained.

2. Donation to individuals from whom informed consent can be obtained is the preferred approach.
3. After consultation with the PHP and BRMD programs, donation to food pantries, soup kitchens or other 3rd party entities that intend to redistribute the product can be considered.
4. All meat that is donated in processed and packaged form should be processed and packaged in a state or USDA approved and licensed meat processing plant.

HANDLING IN THE FIELD

- Guidelines published by the appropriate state wildlife management departments for field dressing procedures and carcass handling to minimize exposure to CWD infectious material should be followed at all times.
- Sanitary conditions should be maintained throughout the process from the time of kill through field dressing and transport.
- Positive carcass identification linked to the CWD sample associated with that carcass must be established and maintained from the time of kill, transport, storage, processing, and donation.
- All carcasses and carcass parts, whether donated or not, should be transported according to all existing state and federal laws and regulations regarding transport of elk or deer carcasses and parts from areas with negative or unknown CWD status.
- Any carcasses to be disposed of in a landfill should be disposed of in accordance with all existing local, state, and federal laws and regulations regarding disposal of such carcasses or carcass parts from areas with negative or unknown CWD status.

The PHP is available for consultation on how to help maintain sanitary conditions during field dressing and carcass transport.

PROCESSING AND DISTRIBUTION

- Parks should work closely with appropriate state or local officials to ensure compliance with all state laws and regulations regarding donation of wild game meat.
- Ideally, carcasses should not be processed into edible meat cuts until final CWD testing results are obtained. If this is not practical, each batch of carcasses processed should retain clear batch identification until CWD test results are available. Batch records should include all individual carcass identifications that comprise the complete batch. A batch is defined as all carcasses that are processed into edible cuts between complete processing equipment cleaning and sanitizing.
- All CWD tested meat intended for donation should be held under the park's or meat processor's direct control until CWD test results are obtained and the meat is cleared for consumption.
- A positive CWD test for any animal in a batch should result in the entire batch of processed meat or carcasses being appropriately disposed of according to state and federal laws regarding disposal of such carcasses/meat. Additionally, any positive CWD test moves the park into GUIDANCE SECTION 1.

GUIDANCE SECTION 4

PUBLIC HUNTS IN AREAS AFFECTED BY CWD

Section 4 guidance is intended for park units falling within category #4 of the Definition of an Area Affected by CWD

The PHP would like to be notified of the park's intentions to hold a public hunt before it takes place.

A park can reasonably approach the issue of public hunts the way various state wildlife agencies have. As discussed previously, this should involve the concept of informed consent. In the context of a public hunt, gaining informed consent should include at a minimum the following elements.

- Inform hunters about the disease, its distribution, and its prevalence.
- Inform hunters about any potential human health risk as it is understood by current science.
- Give hunters carcass handling and processing recommendations for reducing the risk of exposure to the CWD causative agent.
- Give hunters information about CWD testing and encourage them to have their animals tested before they consume any meat from the animals.
- Confer ownership of the animal to the hunter at the time of the kill.
- Parks are encouraged to work closely with state wildlife officials to mirror the program as closely as possible to the state program in order to reduce confusion on the part of hunters.

If the park has any concerns about the adequacy of a state agency's program, the PHP is available for consultation on a case by case basis.

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APPENDIX F

Review of Elk Fertility Control

September 14, 2007

INTRODUCTION

Managing the overabundance of certain wildlife species has become a topic of public concern (Rutberg et al., 2004). Species such as Canada geese (Branta canadensis), coyotes (Canis latrans), white-tailed deer (Odocoileus virginianus), and elk (Cervus elaphus nelsoni) have become either locally or regionally overabundant throughout the United States (Fagerstone et al., 2002). In addition, traditional wildlife management techniques such as hunting and trapping are infeasible in many parks and suburban areas, forcing wildlife managers to seek alternative management methods.

The use of reproductive control in wildlife management has been assessed for the last several decades. Its use has gained more attention as the public has become more involved in wildlife management decisions. Interest in reproductive control, as an innovative alternative to traditional management methods, has led to the current state of the science (Baker et al., 2004). Often, the use of reproductive control is promoted in urban and suburban areas where traditional management tools, such as hunting, are publicly unacceptable or illegal due to firearm restrictions (Kilpatrick and Walter, 1997, Muller et al., 1997).

The following appendix describes the current state of reproductive control (2007) as it relates to ungulate (hoofed mammals) management with an emphasis on experimental studies in elk. In addition to describing the current technology available, it also covers population management challenges, regulatory issues, logistics, and consumption issues. It should be noted that since technology is changing rapidly in this field of research, this appendix is meant to be a description of the types of technology available and is not all-inclusive.

CURRENT TECHNOLOGY

The area of wildlife contraception is constantly evolving as new technologies are developed and tested. For the sake of brevity, this appendix will only discuss reproductive control as it applies to female elk. There is a general understanding in herd based species, such as elk, that managing the female component of the population is more effective than managing the male component. Based on the polygamous breeding behavior of elk, suppressing male fertility would be ineffective if the overall goal is population management.

There are three basic categories of reproductive control technology: (1) immunocontraceptives (vaccines), (2) non-immunological methods (pharmaceuticals), and (3) physical or chemical sterilization.

IMMUNOCONTRACEPTIVES

It is suggested that immunocontraceptive vaccines offer significant promise for future wildlife management (Rutberg et al., 2004). Immunocontraceptive treatment involves injecting an animal with a vaccine that, "stimulates its immune system to produce antibodies against a protein (i.e., antigen) involved in reproduction" (Warren, 2000). In order to provide for sufficient antibody production, an adjuvant is combined with the vaccine. An adjuvant is a product that increases the intensity and duration of the immune system's reaction to the vaccine. There are two primary types of antigens used in fertility

control vaccines tested in elk: porcine zona pellucida (PZP) and gonadotropin releasing hormone (GnRH).

PORCINE ZONA PELLUCIDA (PZP). The majority of immunocontraceptive research in wildlife has been conducted using PZP vaccines, and has been used experimentally in free-ranging Tule elk (Shideler et al., 2002) and captive as well as free-ranging Rocky Mountain elk (Garrott et al., 1998, Heilmann et al., 1998). Due to its mechanism of action, this type of vaccine is only effective in females. Until recently there were only two PZP vaccine products being developed- one is simply called PZP, and the other SpayVac™, however the company producing SpayVac™ has stated that it will no longer begin new research projects involving SpayVac™ in cervids. The other PZP vaccine has been used extensively in a variety of ungulates including white-tailed deer (Kirkpatrick et al., 1997; Turner et al., 1992, 1996; Walter et al., 2002a, 2002b), horses (Kirkpatrick et al., 1990, 1995, 1997; Turner et al., 1997, 2002), exotic species (Kirkpatrick et al., 1996a; Frank et al., 2005), and elk (Shideler et al., 2002; Garrot et al., 1998; Heilmann et al., 1998) in the course of investigating its effectiveness.

The currently available PZP vaccine formulation is effective for one year, though multi-year applications are also being studied. There are several limitations to the PZP based vaccines. First, at this time, PZP vaccines require annual boosters in order to maintain infertility, resulting in the need to mark treated animals and re-treat the same individuals each year. Second, regulatory agencies (e.g. the Food and Drug Administration and the Environmental Protection Agency) have not definitively determined whether vaccine components pose a human health risk. However, adjuvanted PZP does not appear to be a risk to non-target species if consumed orally (Barber and Fayrer-Hosken, 2000). Finally, the PZP based vaccines often cause abnormal out of season breeding behavior in treated populations (Fraker et al., 2002, Heilmann et al., 1998; McShea et al.,1997) as treatment with PZP causes repeated estrous cycling in females, which can result in late pregnancies and behavioral changes.

GONADOTROPIN RELEASING HORMONE (GNRH) VACCINES. GnRH is a small neuropeptide (a protein-like molecule made in the brain) that plays a necessary role in reproduction. It is naturally secreted by the hypothalamus (a region of the brain that regulates hormone production), which directs the pituitary gland to release hormones that control the proper functioning of reproductive organs (Hazum and Conn, 1998). In an attempt to interrupt this process, research has focused on eliminating the ability of GnRH to trigger the release of reproductive hormones. One solution that has been investigated is a vaccine that, when combined with an adjuvant, stimulates the production of antibodies to GnRH. These antibodies attach to GnRH in the hypothalamic region and prevent the hormone from binding to receptors in the pituitary gland, thus suppressing the secretion of downstream reproductive hormones.

GnRH vaccines have been used in a variety of wild and domestic ungulates as well as other wildlife species. One such GnRH vaccine being researched and developed is GonaCon™. In addition to developing an adjuvant with fewer unwanted side effects, researchers are also studying ways to develop a multi-year dose of the vaccine (USDA 2007). Potential benefits of this vaccine include the longer-lasting contraceptive effect and the lack of repeated estrous cycling. There are currently two ongoing studies investigating the safety and efficacy of GonaCon™ in elk (J. Powers personal communication, 2006). However, at this stage there are many uncertainties about this vaccine. First, like PZP vaccines, there is little information regarding the human and non-target species health risks. True health risks are likely to be negligible; however, more research is needed to confirm this hypothesis. Second, there is little information regarding vaccination of pregnant animals. Third, the vaccine can cause antibody development to not only the GnRH antigen but also a component of the adjuvant. This may cause difficulties if attempting to determine the Johne's disease status of a population of treated elk. Finally, there is limited published data using this vaccine in free-ranging animals. More work is necessary to establish population and herd level effects.

NON-IMMUNOLOGICAL REPRODUCTIVE CONTROL METHODS

This group of reproductive control agents includes GnRH agonists, GnRH toxins, steroid hormones, and contragestives.

GNRH AGONISTS. GnRH agonists are similar in structure to GnRH and act by attaching to receptors in the pituitary gland. By attaching to the receptors, GnRH agonists reduce the number of binding sites available and thereby suppress the effect of natural GnRH. As a result of this suppression, reproductive hormones are not released (Aspden et al., 1996; D'Occhio et al., 1996). However, not all agonists have the same effects in all species. In fact, some can have an effect that is the opposite of what is intended. Therefore, it is important to fully understand the effects of a product on a given species. The GnRH agonists have been used experimentally in captive and free-ranging elk (Lincoln, 1987, Baker et al., 2002).

Leuprolide acetate: Leuprolide is one GnRH agonist that is being studied. Tests reveal that when it is administered as a controlled-release formulation it results in 100% pregnancy prevention in treated female elk (Baker et al., 2002; Baker et al., 2005; Conner et al. in press). In addition, the treatment is reversible, and effects last only for a specific period of time (90-120 days; Baker et al., 2002; Trigg et al., 2001). This means that, should a female be treated in one year, before the breeding season, it will not be come pregnant in that year, but if the female is not re-treated the following year, then it has the same chances of becoming pregnant as an animal that was never treated. Treatment using leuprolide differs from GnRH vaccines in that it does not require an adjuvant; however, it does require a slow release implant that remains under the skin or in the muscle for the duration of treatment effectiveness and likely longer.

An added benefit to the use of leuprolide is that it requires only one treatment for the first year of contraception, whereas some immunocontraceptive vaccines require re-treating the same individual several times with additional doses to develop and maintain infertility. Additionally, leuprolide is not likely to pose a threat to the environment or non-target species (including humans; Baker et al., 2004). In contrast with some of the immunocontraceptive vaccines, leuprolide does not appear to have negative physiological side effects, and short term behavioral effects are minimal.

GNRH TOXINS. GnRH toxins consist of a cellular toxin that is combined with a GnRH analog. The toxin is carried to the receptors in the pituitary gland and is internalized. Once absorbed, the toxin disrupts cellular function and can lead to cellular death. When this occurs the production of reproductive hormones is affected. This process has been studied in female mule deer (Baker et al., 1999), and the technology is still being developed. This contraceptive method has not been explored in elk.

STEROID HORMONES. The field of wildlife contraception began with research examining the manipulation of reproductive steroid hormones. Treatments using steroids can include administering high doses of naturally occurring hormones, such as estrogens or progesterone. However, the treatment usually entails the application of synthetic hormones, such as norgestomet, levangesterol, and melangestrol acetate. Most products that are available are used in domestic animal or zoological veterinary medicine, and have not been used widely in free-ranging wildlife. Some issues related to using steroids include: difficulties in treating large numbers of animals for extended periods of time, negative side effects experienced by the treated animals, and concerns over the consumption of treated animals by non-target species, including humans. Therefore reproductive steroids are not recommended for use in free-ranging wildlife.

CONTRAGESTIVES. Contragestives are products that terminate pregnancy. Progesterone is the primary gestational hormone for maintaining pregnancy in mammals. Many contragestives act by

preventing progesterone production or blocking its effect, thereby affecting pregnancy. The primary contragestive that has been researched for use in domestic animals and wild ungulates is Prostaglandin F2α analogue (Becker and Katz, 1994; DeNicola et al., 1997; Waddell et al., 2001). PGF2α has been used successfully to disrupt pregnancy in captive elk (Bates et al., 1982; J. Powers personal communication, 2006). Lutalyse® is a commercially available form of Prostaglandin F2α analogue. Unlike many of the other alternatives, there are no issues related to consumption of the meat when it has previously treated with this product. Difficulties with contragestives include: timing of administration, percent efficacy, potential to re-breed if breeding season is not finished, and the potential for aborted fetuses on the landscape.

STERILIZATION. Sterilization can be either a surgical or chemical treatment process. Surgical sterilization is an intensive and invasive procedure that requires a veterinarian and is common in managing domestic animal fertility. Physical sterilization has not been used for population management in free-ranging elk populations. Chemical sterilization using sclerosing agents to initiate scar tissue development and physical damage to the reproductive tract is typically performed on males as a contraceptive measure. Both types of sterilization are generally permanent.

REGULATORY ISSUES

The application of reproductive control agents in free-ranging wildlife is fairly new and is currently (August 2007) regulated by both the United States Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA). None of the agents discussed here are currently licensed or labeled for use as reproductive control agents in wildlife species. However, some can be used in a research setting under an Investigational New Animal Drug (INAD) exemption through FDA, as an experimental application of a pesticide through EPA, or in either a management application or experimental setting with veterinary prescription if the drug is approved for use in other species (Extralabel drug use – ELDU).

INAD exemptions and experimental use permits are granted by the FDA or the EPA respectively for the purpose of allowing research to facilitate the gathering of information pertaining to the agent prior to granting full approval for its use. Some of the agents discussed above, specifically several of the pharmaceuticals, have FDA approval for therapeutic use in humans (e.g., leuprolide) or other non-wildlife species (e.g. prostaglandin F2α). As a safety precaution, each approved agent is labeled indicating how it is to be used. To use the drug in a manner other than that indicated on the label, a licensed veterinarian must prescribe the agent and it must be used in accordance with the Animal Medicinal Drug Use Clarification Act of 1994. The prescribing veterinarian is accountable for prescribing and labeling a product when it is to be used in an extra-label manner. However, the owner (in this case, the NPS unit manager) is responsible for using the agent in the prescribed manner. In addition, the veterinarian must establish a meat residue withdrawal period - the time it takes for the animal to fully metabolize and clear the drug from its tissue - for any animals that may enter the human food chain. A treated animal may not be killed and enter the human food chain before the meat residue withdrawal period is over. Treated animals need to be marked to prevent this from occurring.

POPULATION MANAGEMENT CHALLENGES

Managing local populations of wildlife using reproductive control can be difficult. The level of difficulty relates to the number of animals that need to be treated, their behavior (i.e., solitary, herd, diurnal, nocturnal, habituation, etc.), the topography of the habitat in which they are found, as well as treatment protocol logistics. In order for reproductive control agents to effectively reduce population size, treatment with an agent must decrease the reproductive rate to less than the mortality rate. In many protected

environments, where human alteration of the landscape and a lack of a full suite of large predators, mortality rates are generally very low. Regarding elk in and around Theodore Roosevelt National Park, the average survival rates – with hunting – for females and males are 96% and 52%, respectively (Sargeant and Oehler, 2004). Additionally, a significant amount of population data is necessary to successfully monitor the effects of long-term population changes due to the use of contraceptives (Rudolph et al. 2000, Hobbs et al., 2000, Porter et al., 2004).

Reproductive control agents generally decrease population levels slowly, and over time, may not result in a sustained reduction of population growth. Modeling conducted by the science team for this plan/EIS showed treating 75% of the female elk population in the park annually resulted in a brief suspension of population growth. However, within the first five years, the population resumed growing at a rate of 6.5% annually. Even when the model was run assuming 90% of female elk are treated annually, the initial reduction in population growth was not sustained, and the population resumed growing at 1.5% within the first 10 years. Hobbs et al. described a model that suggests white-tailed deer density will remain constant if 90% of the initial females are treated with a long term reproductive control agent. Subsequently, 90% of female fawns would require treatment. This would stabilize the population if the average mortality rate is 10 percent. However, this result does not hold for short-duration agents (1 year duration). In this case, the 90% of reproductively mature females would require treatment each year in order to maintain constant herd numbers (Hobbs et. al., 2000). Reproductive control techniques are best suited to localized populations where the number of breeding females to be treated is small (e.g., less than 100 animals) and managers are trying to maintain the population between 30% and 70% of carrying capacity (Rudolph et al., 2000).

ADMINISTERING THE TREATMENT

There are two basic approaches to administering reproductive control agents: capture and treat and remotely treat. Capture and treat requires physically and/or chemically restraining the animal and using a syringe or other delivery device to treat the animal. One benefit of this approach is that it allows for marking the elk which facilitates subsequent treatments. This method also is helpful in collecting valuable biological data, and it provides notice of meat residue withdrawal times. Depending on the method of capturing the animal (round-up versus ground darting versus net gunning or darting from a helicopter), this approach may be more time intensive and can be more expensive than using a remote delivery system, especially as treated animals tend to be more difficult to recapture. In addition, capture-related mortality may also be a concern.

A remote delivery system uses an adapted firearm (i.e., dart gun) and some form of projectile that contains the reproductive control agent. These projectiles can be darts or another form of delivery system (e.g., biobullet) that can be used at a distance without needing to capture the animal first. One shortcoming of remote treatment is that it does not allow for permanently marking the treated animals. In addition, previously treated animals can be more difficult to re-treat.

POTENTIAL IMPACTS TO ELK BEHAVIOR AND HEALTH

There have been few studies designed to intensively assess the effects of reproductive control on elk behavior and health. For many agents, additional research is needed to fully understand the behavioral, social, and physiological consequences of reproductive control. However, some research has been conducted on the effects of reproductive control on deer, and although the effects are unknown for elk, they may be similar. Because each group of reproductive control agents operates differently, studies show that the effects to the individual elk or population could vary widely. Porcine zona pellucida (PZP) immunocontraceptive agents have been documented to cause the continued cycling of females, which can

extend the breeding season or rut (Fraker et al., 2002; Heilmann et al., 1998; McShea et al., 1997). This may lead to an extended period for herding behaviors in males. In addition, if the female gets pregnant later in the year, there are changes to fawning dates and survival rates, as they are born later in the season, similar to what has been seen in white-tailed deer (DeNicola et al., 1997). Other immunocontraceptives such as the gonadotropin releasing hormone (GnRH) vaccine, when applied in male deer, have resulted in depressed antler development and lack of interest in breeding (Miller et al., 2000). When this vaccine is applied to female deer, they display decreased estrous behavior during the breeding season (Miller et al., 2000). If enough females in the population are treated, it may result in a disruption to natural male/female social as well as reproductive interactions. An ongoing study is investigating the effects of GnRH vaccination on reproductive behavior in captive female elk (J. Powers personal communication, 2006).

The group of reproductive control agents categorized as non-immunocontraceptive methods can also have varying effects on behavior and health. For example, GnRH agonists have not been documented as causing behavioral changes when applied to female elk (Baker et al., 2002). GnRH agonists have had variable behavioral effects when applied to male elk (Lincoln, 1987). Contragestives pose a different kind of problem depending on when the treatment is applied. If applied too early in the breeding season, then the female could potentially breed again later in the year extending the rut and resulting fawn-related health issues such as those described for some immunocontraceptive agents above. If applied too late in the season contragestives can result in health implications for the female, as described for deer (DeNicola et al., 1997).

Depending on the method of sterilization this procedure may have behavioral effects on both male and female elk. If gonads are removed, the source of several important reproductive hormones will be removed. This may change elk social interactions. If gonads are not removed, females will continue to ovulate and show behavioral signs of estrus and consequently may extend the breeding season similar to the phenomenon seen with PZP immunocontraception.

As described above, any effect that could extend the rut has the potential for secondary effects to the individual elk. Increased attempts to breed, especially if unwelcomed, can result in increased aggression and movements. This can be problematic in areas with high vehicle use, as there could be increases in elk/vehicle collisions or other negative interactions with the public. However, as stated above, the effects of reproductive control agents still need more research in order to better understand the variations in elk behavior and health.

POTENTIAL IMPACTS TO CONSUMPTION

As described above, some of the reproductive control agents can result in issues related to human consumption of meat. These issues can be avoided by: 1) using an agent that does not pose any risk to humans, 2) marking treated animals and providing meat residue withdrawal times (if established), 3) providing educational materials to the local public that may consume hunted animals in the general area of treated animals, and 4) increasing research efforts to determine true human consumption risks.

TABLE F-1. A SUMMARY OF THE PERCEIVED ADVANTAGES AND DISADVANTAGES OF DIFFERENT REPRODUCTIVE CONTROL AGENTS FOR ELK

Reproductive Control Agent	Mechanism	Advantages	Disadvantages
PZP Vaccine	Immunization – antibodies directed at the ovum (egg).	• No hormonal residues. • Effective for at least 1 year. • Antibodies not harmful to humans. • Apply any time of year. • No apparent adverse health effects. • Generally reversible. • Currently available for use as an INAD (may change in the future).	• Requires booster vaccinations. • Only useful in females. • Females continue to cycle out of natural breeding season. • Not 100% effective. • Animals must be permanently marked. • No meat residue withdrawal time established.
GnRH Vaccine	Immunization – antibodies directed at a protein hormone that is needed for reproduction.	• Same as above plus: • Stops hormonal cycling. • Applicable to both males and females. • Is likely to be EPA approved for use as a pesticide in 2007-2008.	• May remove primary and secondary sexual characteristics. • May affect behaviors. • Currently animals must be permanently marked. • Incompletely tested in free-ranging populations. • No meat residue withdrawal time established.
GnRH Agonists Leuprolide Buserelin	Overwhelming GnRH receptors on anterior pituitary suppressing release of reproductive hormones.	• No hormonal meat residues. • No affect on reproductive behaviors. • FDA approved for therapeutic use in humans. • Slow-release formula available. • Remote delivery possible.	• Annual treatment prior to breeding season. • Meat residue withdrawal period not well established.
GnRH Toxin	Linking a GnRH analog to a cellular toxin which targets and kills GnRH receptors preventing release of reproductive hormones.	• May cause permanent sterility.	• More research is needed before using this product in elk.

Reproductive Control Agent	Mechanism	Advantages	Disadvantages
Steroid Hormones Progestins Estrogens	Controlling the reproductive cycle by administering steroid hormones or their analogues.	• Variable efficacy. • Variable duration.	• Some formulations can accumulate in tissues and may pose a health risk to scavengers or humans. • Some steroids can be harmful to the target species. • Animals must be marked. • Administered by slow release implants or repeated feeding.
Contragestion $PGF_{2\alpha}$	Pre-term pregnancy termination.	• Administered by biobullet or hand injection. • FDA approved for use in domestic large animals. • No meat withdrawal period in domestic cattle.	• Administered when the animal is pregnant. • Re-breeding may occur if given early. • Increased health complications if given late.

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Walter, W. D., P. J. Perkins, A. T. Rutberg, and H. J. Kilpatrick
2002b Evaluation of immunocontraceptive adjuvants, titers, and fecal pregnancy indicators in free-ranging white-tailed deer. Wildlife Society Bulletin 30:908-914

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2000 "Overview of Fertility Control in Urban Deer Management." In Proceedings of the 2000 Annual Conference for the Society of Theriogenology, 2 December 2000, San Antonio, Texas, 237–46. Nashville, TN: Society for Theriogenology.

APPENDIX G

USFWS Correspondence Regarding Reintroduction of Wolves to Wind Cave National Park

From: Scott_Larson@fws.gov
To: Dan_Foster@nps.gov
cc: Pete_Gober@fws.gov
Date: 06/01/2006 05:02 PM EST
Subject: Re: Wind Cave and wolves

Dan,

Given the information in your email below, I spoke with personnel in our Regional Office and inquired what priority the Fish and Wildlife Service (Service) might place on a request for an Endangered Species Act section 10(j) designation for 2-3 wolves to be placed in Wind Cave National Park, in South Dakota. Those wolves would not be expected to be part of a breeding population nor count towards goals in a Recovery Plan for wolves. Further, as you note, Wind Cave is marginal habitat, while the tools and/or techniques to confine the wolves to the Park (electric collars and fence) pose significant chances of failure over time.

The South Dakota Ecological Service Field Office has undertaken three "nonessential experimental" population designations (section 10(j)), in the last 15 years for black-footed ferrets and therefore we are familiar with that process. Our experience shows these processes take 2-3 years and approximately 1.5 FTE's per year. Wolves are likely to be more controversial than ferrets and therefore a 10(j) process for wolves in Wind Cave would probably be longer and more expensive than "nonessential experimental" designations completed for ferrets. Further, there are additional peer review requirements that have been implemented since our last section 10(j) which could add additional FTE effort and time. Accordingly, given the information in your email, the Service would not expend our limited and declining resources attempting a section 10(j) designation for 2-3 wolves that would not be expected to benefit wolf recovery goals. Therefore, to include the wolf "nonessential experimental" designation option for Wind Cave NP as an alternative for elk reduction, would be disingenuous to put forth to the public since it would rely so heavily on an action the Service is unlikely to undertake.

Thank You
Scott Larson
Fish and Wildlife Service
Pierre, South Dakota 57501

RECEIVED

United States Department of the Interior

NATIONAL PARK SERVICE
WIND CAVE NATIONAL PARK
26611 U.S. Highway 385
HOT SPRINGS, SOUTH DAKOTA 57747

JUN 20 2008

U.S. FISH & WILDLIFE SERVICE

RECEIVED
JUL 22 2008
Wind Cave National Park

IN REPLY REFER TO:

L7617 (WICA-RM)

June 18, 2008

RECEIVED
JUL 24 2008
Wind Cave National Park

This consfitutes a report of the Department of the Interior prepared in accordance with the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). We have reviewed and have NO OBJECTION to this proposed project.

7-17-08 DG
Date Supervisor

Mr. Scott Larson
U.S. Fish & Wildlife Service
Ecological Services Division, 420 S. Garfield Ave., Ste. 400
Pierre, SD 57501

Subject: Section 7 Consultation regarding the preparation of Elk Management Plan for Wind Cave National Park

Dear Mr. Larson:

This letter is in continuance of our discussions concerning Wind Cave National Park (WICA) preparing a Draft Elk Management Plan and Environmental Impact Statement (plan/EIS).

Wind Cave National Park is proposing to manage the elk population within the park, primarily to prevent impacts to other natural resources in the park, which would occur as the herd size increases. The principal tool the park had been using to keep population numbers in line with management goals, translocation of live elk, is no longer an option because chronic wasting disease (CWD) is present in the elk population. Therefore, this planning process and EIS was needed to examine alternatives for elk management and identify strategies for the park that will help achieve elk population levels that are in balance with other native species in the park, including wildlife and vegetation communities, natural ecosystem functions, and other park resources.

The park is partnering in this elk management planning effort with the South Dakota Department of Game, Fish and Parks (SDGFP). The park and SDGFP entered into a Memorandum of Understanding (MOU) that established the standards, terms, conditions, roles, and responsibilities in the project planning process for development of an elk management plan that is consistent with the State's more comprehensive southern Black Hills Plan.

The plan/EIS assesses impacts to cultural resources (archeological and ethnographic resources); natural resources (elk, air quality, soils, vegetation, water quality, special status species, and other wildlife); visitor experience; social values; socioeconomics; adjacent land uses; human health and safety; and park operations.

High population numbers of elk may cause behavioral and physiological changes, including changes in reproduction, sex and age ratios, and health and body condition. Elk may also occupy undesired habitat or cause impacts to private lands. Elk management activities may cause trampling and loss of vegetation, resulting in increased soil erosion along stream banks. Elk foraging may adversely affect vegetative communities and the natural species composition. Elk populations may adversely affect other wildlife (bison, pronghorn, prairie dogs, etc.). Air quality may be affected by elk carcass incineration operations. Archeological sites may be impacted as a result of erosion, trampling caused by elk browsing activities, or elk management actions. Elk management activities may be of interest from an ethnographic resource perspective to tribes affiliated with Wind Cave National Park. Elk management activities could reduce elk as a recreational resource for some visitors (e.g., wildlife viewing opportunities, chance sightings, and elk "bugling" in the fall). The movement of elk in and out of Wind Cave National Park onto adjacent private lands may contribute to property damage (e.g., crop depredation, fencing). Elk management activities have the potential to impact park operations. Certain aspects of elk management strategies could potentially affect health and safety of park staff, visitor contractors, recipients of donated meat, etc.

The alternatives in the plan/EIS include:

- Alternative A – No Action: No new management actions beyond those utilized as of the commencement of the EIS analysis would be undertaken to manage elk.
- Alternative B – Hunting Outside the Park: Wildlife "gates" would be installed along the boundary fence to allow elk but not bison movement. The gates would be closed during hunting seasons to minimize elk reentry into the park. Hazing may be used to ensure the appropriate number of elk leave the Park.

- Alternative C – Roundup/Live Ship or Euthanasia within Park: Elk would be captured and shipped for slaughter and donation (if a partner(s) to be responsible for transport, slaughter/processing and donation of meat is found), or killed and disposed of. Donations would be in accordance with National Park Service Public Health Program guidelines and no CWD-positive carcasses would be donated.
- Alternative D – Sharpshooting: Authorized agents (which may include skilled volunteers) would reduce or maintain elk numbers in the Park. Carcasses would be removed from the backcountry and incinerated, or left in place if managers believe their breakdown is environmentally preferred. The CWD test samples will be taken from adult carcasses.

Alternatives E and F are analyzed solely for maintenance of the elk population after initial reduction. At this time, the use of sterilization or contraceptives has not been proven through science to effectively manage wildlife populations. The park will not use either of these alternatives unless future scientific studies prove these methods to be effective and efficient means of elk population control, and the preferred and adaptive management efforts fail to maintain elk population within the target range. Should this occur alternatives E and F may be carried out in the following ways.

- Alternative E – Contraception (sterilization): Following initial reduction using one of the methods in alternatives B–D, maintenance of the herd size would be through permanent surgical sterilization of a select number of reproductive female elk. Sterilized cows would be marked (ear tag, freeze branding, etc.) to reduce the risk they are hunted outside the Park or recaptured for sterilization inside the park.
- Alternative F – Fertility Control Agents: Cow elk would be treated with chemical fertility control agents to limit calving. While no existing chemical contraceptive currently meets the needs of the park, such agents may become available in the future. To be considered feasible for the park's use as an elk management option, fertility control agents would need to meet the following criteria: be effective with a single treatment; be at least 85% effective; have appropriate approvals and certifications; be safe for treated animals; result in no recognizable behavioral effects; be safe for non-target animals; and be effective for more than one year.

Alternatives Considered but Dismissed (with brief rationale for dismissal):
- Hunting in the Park: inconsistent with existing laws, policies, and regulations.
- Translocation of Elk: NPS policy prohibits shipping live elk from CWD areas.
- Habitat Alteration: habitat alterations would invite more elk into the park.
- Fencing in Elk: inhibits natural migration pattern of elk and other wildlife.
- Aerial Sharpshooting: negative public perception, visitor experience and safety impacts.
- Wolf Reintroduction: no support from SDGFP or U.S. Fish and Wildlife Service.

The U.S. *Endangered Species Act* (16 USC §§ 1531 et seq.) mandates that all federal agencies consider the potential effects of their actions on species listed as threatened or endangered. The only animal species that has potential to be affected by the management alternatives is the federally endangered black-footed ferret.

Reducing the number of elk utilizing the park would likely reduce the chance of loss in prairie dog colonies from trampling or from competition for forage. This is a relative benefit for prairie dogs and black-footed ferrets. However, the chances of elk creating new habitat for prairie dog occupation would be lower, a relative negligible or minor adverse impact on ferrets. In addition, the park would not be forced to manage other grazers, including prairie dogs, at the lower end of the range indicated in its Prairie Dog Management Plan, a benefit for ferrets compared to the possible long-term outcome under the no action alternative. On balance, the impact of elk reduction is likely to be long term, localized and beneficial with "no effect" or a finding of "not likely to adversely affect" under the Endangered Species Act.

A copy of the plan/EIS is provided herein for review and comment. The comment period for the plan/EIS is from June 20, 2008 until August 18, 2008. We look forward to receiving your input on the plan/EIS and any concerns you have about this project. We would be pleased to discuss this project further, either by telephone or in a meeting.

If you have any questions, please contact me or Dan Foster, our point of contact for the plan. We can both be reached at (605) 745-4600.

Sincerely,

Vidal Davila

Vidal Davila
Superintendent

APPENDIX H

SDGFP Correspondence Regarding Reintroduction of Wolves to Wind Cave National Park for Elk Management

DEPARTMENT OF GAME, FISH AND PARKS
Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

RECEIVED
JUL 14 2006

July 12, 2006

Linda Stoll, Superintendent
Wind Cave National Park
2611 US Highway 385
Hot Springs, SD 57747

Dear Linda:

It is my understanding you have requested our position regarding the potential release of wolves into Wind Cave National Park. I assume this request is part of your draft planning process to look at various alternatives to help the Park control their elk population.

I need to be very clear on this subject. Our Department is totally opposed to this concept. Once released these animals will undoubtedly travel outside of the Park boundaries and immediately become our management problem. The release of these large predators has a high potential to create numerous wildlife management problems much less their impact on livestock production. Thus we will not encourage, endorse, approve or officially permit the introduction of wolves into South Dakota for purposes of release to the wild. To be very blunt, under no circumstances will we support this proposal.

I formally request that this option be removed from your planning documents. There are numerous more practical alternatives to reduce elk populations in Wind Cave National Park without release of wolves.

Sincerely,

John L. Cooper
Department Secretary

cc: Governor Mike Rounds
Larry Gabriel, Department of Agriculture
Dr. Sam Holland, State Veterinarian

Wildlife Division: 605/773-3381 Parks and Recreation Division: 605/773-3391 FAX: 605/773-6245 TTY: 605/773-3381

APPENDIX I

Wind Cave National Park - Sites with Exemplary High-Quality Vegetation

(Marriott et al. 1999).

Occurrence ranks range from A (high) through D (low). The three major factors on which overall occurrence rank is based are condition (e.g., old-growth, burden of exotics), landscape context, and occurrence size (based on the combined acreage of all stands of a type that are not separated by a substantial barrier within the site).

No areas at Wind Cave National Park were ranked BC or lower.

VEGETATION OCCURRENCES AT WIND CAVE RANKED A:

Western Great Plains Streamside Vegetation
Wheatgrass/Needleandthread Mixed-grass Prairie
Northern Great Plains Little Bluestem Prairie
Mountain Mahogany/Sideoats Grama Shrubland
Ponderosa Pine/Little Bluestem Woodland
Ponderosa Pine/Sedge Woodland
Ponderosa Pine/Western Wheatgrass Woodland
Ponderosa Pine/Chokecherry Forest
Ponderosa Pine Limestone Cliff
Redbeds (Siltstone) Rock Outcrop

VEGETATION OCCURRENCES AT WIND CAVE RANKED AB:

Western Wheatgrass/Green Needlegrass Mixed-grass Prairie
Needleandthread/Blue Grama Mixed-grass Prairie
Western Snowberry Shrubland
Chokecherry Shrubland
Creeping Juniper/Little Bluestem Dwarf-shrubland
Ponderosa Pine/Common Juniper Woodland
Box Elder/Chokecherry Forest
Prairie Dog Town Grassland Complex

VEGETATION OCCURRENCES AT WIND CAVE RANKED B:

Creeping Spikerush Wet Meadows
Prairie Cordgrass/Sedge Wet Meadow
Cottonwood/Wolfberry Floodplain Woodland
Black Hills Granite/Metamorphic Rock Outcrop

APPENDIX J

Non-Predatory Small Mammals at Wind Cave National Park

(NPS 2006j)

Common Name	Scientific Name	Abundance
Desert Cottontail	*Sylvilagus audubonii*	Common; arid grasslands and prairie dogs towns
Eastern Cottontail	*Sylvilagus floridanus*	Common in woodlands
Mountain Cottontail	*Sylvilagus nuttallii*	Rare; above 4,500 feet
Whitetail Jackrabbit	*Lepus townsendii*	Rare; grasslands
Hayden's Shrew	*Sorex haydeni*	Common in park riparian areas
Black-tailed Prairie Dog	*Cynomys ludovicianus*	Abundant
Bushytailed Woodrat	*Neotoma cinerea*	Common in park rocky areas
Deer Mouse	*Peromyscus maniculatus*	Abundant throughout park
Hispid Pocket Mouse	*Chaetodipus hispidus*	Rare; arid and rocky habitats
House Mouse	*Mus musculus*	Rare Exotic
Least Chipmunk	*Tamias minimus*	Common in rocky outcrops and near dead snags
Meadow Jumping Mouse	*Zapus hudsonius*	Uncommon; moist draws and riparian areas
Meadow Vole	*Microtus pennsylvanicus*	Common in park riparian areas
Muskrat	*Ondatra zibethicus*	Rare; not much suitable habitat (ponds)
Northern Flying Squirrel	*Glaucomys sabrinus*	Rare
Northern Pocket Gopher	*Thomomys talpoides*	Common in park grasslands
Olive-backed Pocket Mouse	*Perognathus fasciatus*	Rare in park grasslands
Porcupine	*Erethizon dorsatum*	Common; nocturnal
Prairie Vole	*Microtus ochrogaster*	Common; grasslands
Red Squirrel	*Tamiasciurus hudsonicus*	Common in park woodlands
Southern Red-backed Vole	*Clethrionomys gapperi*	Common; aspen and moist pine habitat
Thirteen-lined Ground Squirrel	*Spermophilus tridecemlineatus*	Common; prairie dog towns and grasslands
Western Harvest Mouse	*Reithrodontomys megalotis*	Uncommon; park grasslands
White-footed Mouse	*Peromyscus leucopus*	Abundant in riparian areas, moist draws
Yellow-bellied Marmot	*Marmota flaviventris*	Occasional sightings in rocky areas

APPENDIX K

State Historic Preservation Officer Consultation Letter, Preparation of Elk Management Plan for Wind Cave National Park

United States Department of the Interior
NATIONAL PARK SERVICE
WIND CAVE NATIONAL PARK
RR1, BOX 190
HOT SPRINGS, SOUTH DAKOTA 57747

IN REPLY REFER TO:

L7617 (WICA-RM)

May 11, 2004

Mr. Jay Vogt
State Historic Preservation Officer
State Historic Preservation Center
South Dakota State Historical Society
900 Governor's Drive
Pierre, South Dakota 57501-2217

Subject: Preparation of Elk Management Plan and Bison Management Plan for Wind Cave National Park

Dear Mr. Vogt:

The purpose of this letter is to inform you that Wind Cave National Park (WICA) is planning to prepare an Elk Management Plan and a Bison Management Plan with the attendant environmental compliance documentation. With the Elk Management Plan we are anticipating the preparation of an Environmental Impact Statement and with the Bison Management Plan we are anticipating the preparation of an Environmental Assessment.

Wind Cave National Park was established in 1903. The Park is made up of 28,295 acres of mixed grass prairie and ponderosa pine forest. By the time WICA was established, both bison (Bison bison) and elk (Cervus elaphus), the major natural grazers, had been extirpated from the Black Hills area. Between 1911 and 1916 elk were reintroduced into the park from Jackson Hole, Wyoming and Yellowstone National Park. Park records are unclear as to the first reintroduction, but by 1916 there were approximately 70 elk in the park. In 1913, fourteen bison donated by the Bronx Zoo were reintroduced to the park. In subsequent years animals were obtained from Yellowstone National Park.

The park is surrounded by a combination of 44 miles of 7' high and four miles of five feet high woven wire fence which is intended to keep bison from wandering out of the Park and to deter the movement of elk in and out of the Park. While bison remain in the park year-round, there are some elk that leave the Park on a daily or seasonal basis while others remain in the Park their entire lives. Most of the elk jump the fence in the southwestern corner of the Park where the shorter section of fence is located. This section of fence was originally designed to provide ingress and egress of elk from the Park. Some of the elk that

leave the Park are harvested, but this limited reduction cannot be relied upon to control the entire population of elk utilizing the Park.

Vegetative surveys conducted in the late 1950s and early 1960s determined that park rangelands were in a state of overuse by elk and bison and led to the establishment of a management population of 350-400 elk and 350-400 bison. In the mid 1950s Park managers killed approximately 700 elk in an effort to control population. In recent years, the Park has been operating under a 1980 Environmental Assessment and a 1994 Elk Management Strategy, both of which call for live trapping and relocating of elk to maintain a population between 350-400 animals. The current elk population (estimated to be 700 in February 2004) far exceeds this management capacity. Park management estimates an annual population increase of 20-25% in the elk herd. Within 3 years the elk population could be 1200-1300.

On July 26, 2002, the Director of the NPS issued a memo to the Parks stating that "deer or elk will not be translocated from areas where CWD (Chronic Wasting Disease) is known to occur". In November 2002 a CWD positive elk was found in the Park. Now that the Park has a confirmed case it can no longer use the management option of trapping and relocating live elk as the means of controlling its elk population. Until the Park develops an Elk Management Plan and EIS it will not be able to effectively manage its elk population over the long-term.

The Park has been operating under a Bison Management Strategy prepared in the early 1990s, which calls for live trapping and relocating of bison to maintain a population between 350-400 animals. The current bison population (estimated to be 400 in October 2003) is still within the management capacity.

Management plans are needed for both species to address new concerns for management (i.e., CWD in elk) since the original strategies were prepared. The plans and environmental documents will address population control alternatives within the Park including lethal means, contraceptives, hazing, no action, etc. The plans will also deal with the development of a long term management policy and surveillance program for diseases, define additional research needs, and for elk, depredation problems outside the Park, and a discussion of raising or lowering the boundary fence.

Wind Cave National Park as a very special place, so we want to be sure that the projects are evaluated as per your concerns. Both of these species are listed as ethnographic resources of importance to American Indian tribes with cultural affiliation to Wind Cave National Park. Therefore, this letter is to formally initiate consultation in accordance with legislation, Executive Orders, regulations, and policy, including section 7 of the Endangered Species Act, sections 101 and 106 of the National Historic Preservation Act of 1966 as amended, 36 CFR 800, National Park Service Management Policies and Director’s Orders 28, Cultural Resources Management and 77, Natural Resource Management.

We have begun work on these plans and the associated environmental documents that will study and assess the impacts to both natural and cultural resources, and determine any required mitigation. We believe that your participation will result in better planning for resource management, and will help ensure that your concerns are adequately considered during the development of these plans and environmental studies. As soon as they are completed, copies of the draft plans and environmental documents will be forwarded to you for review and comment. We look forward to receiving your input on our plans and any concerns you have about these projects. We would be pleased to discuss this project further, either by telephone or in a meeting.

If you have any questions, please contact me or Dan Foster, our point of contact for these plans. We can both be reached at (605) 745-4600.

Sincerely,

/S/ Linda L. Stoll

Linda L. Stoll

Superintendent

United States Department of the Interior

National Park Service

Midwest Region
601 Riverfront Drive
Omaha, Nebraska 68102-4226

29 SEP 2008

H4217 (MWR-CR/HNRP)

Memorandum

To: Superintendent, Wind Cave

From: Regional Director, Midwest Region

Subject: Section 106 Form, WICA-04-08, Elk Management Plan/Environmental Impact Statement

The cultural resources specialists of the Midwest Regional Office and the Midwest Archeological Center reviewed the subject section 106 form as you requested. Their comments are provided on the attached form with an assessment of no adverse effect.

The subject form is returned to you for completion of the section 106 review as provided in the 1995 Programmatic Agreement among the National Park Service, Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. If you have questions, please contact Historian Ron Cockrell at 402-661-1922.

Ernest Quintana

Attacment

TAKE PRIDE IN AMERICA

ORIGINAL

WIND CAVE NATIONAL PARK
ASSESSMENT OF ACTIONS HAVING AN EFFECT ON CULTURAL RESOURCES

A. **DESCRIPTION OF UNDERTAKING**

1. **Park:** Wind Cave National Park, Custer County, South Dakota

2. **Work/Project Description:**
   a. Project name: Elk Management Plan/ Environmental Impact Statement
   Date: July 14, 2008 Project PMIS #: _____
   Park project #(s): WICA-04-08

   b. Describe project and area of potential effects (as defined in 36 CFR Part 800.2(c)); explain why work/project is needed.

The purpose of the *Draft Elk Management Plan and Environmental Impact Statement* is to identify elk management strategies for Wind Cave National Park that will establish elk population levels that are in balance with natural system functions and native wildlife and vegetation communities in the park.

The draft plan/EIS is needed because the park's elk population is not regulated by natural ecosystem processes. Left unchecked, an increasing elk herd wintering in the park would have ever increasing adverse effects on the resources identified above, including native vegetation, wildlife habitat/health, and neighboring land uses.

To meet environmental regulations, the park is considering the no-action alternative, three action alternatives for initial herd reduction (which could also be used as maintenance tools), and two additional action alternatives for the maintenance of the herd at target population levels. Alternative B would make use of gates to keep elk migrating out of the park outside through hunting season, and is the park's preferred alternative. Alternative B was found to be environmentally superior, easier to implement, and less expensive than other alternatives. Alternative C would use round-up and ship live elk to a processing facility or euthanize elk on site in the park. Alternative D would use authorized sharpshooters inside the park; Alternatives E and F would maintain the size of the herd through either sterilization of a select number of female elk or through the use of chemical contraceptives.

3. **Has the area of potential effects been surveyed to identify cultural resources?**
   __X__ No Only 20% of the park has been surveyed for cultural resources.
   ____ Yes Source or Reference
   ____ Check here if no known cultural resources will be affected. (If this is because area has been disturbed, please explain or attach additional information to show the disturbance was so extensive as to preclude intact cultural deposits.)

4. **Potentially Affected Resource(s):**
   Name and number(s):_____ location:_____ NR status:
   Name and number(s):_____ location:_____ NR status:

   Name and number(s):_____ location:_____ NR status:

5. **The proposed action will:** (Check as many as apply.)

____ Destroy, remove, or alter features/elements from a historic structure
____ Replace historic features/elements in kind
____ Add nonhistoric features/elements to a historic structure
____ Alter or remove features/elements of a historic setting or environment (inc. terrain)
___ Add nonhistoric features/elements (inc. visual, audible, or atmospheric) to a historic setting or cultural landscape
_X_ Disturb, destroy, or make archeological resources inaccessible,
_X_ Disturb, destroy, or make ethnographic resources inaccessib
_X_ Potentially affect presently unidentified cultural resources
_X_ Begin or contribute to deterioration of historic features, terrain, setting, landscape elements, or archeological or ethnographic resources
____ Involve a real property transaction (exchange, sale, or lease of land or structures)
____ Other (please specify)

6. **Measures to prevent or minimize loss or impairment of historic/prehistoric properties (Remember that setting, location, and use may be relevant):**

For all alternatives:
The park would verify the locations of known archeological sites in the vicinity of any project areas and would clearly define these areas as sensitive resource areas that are off-limits (without calling attention to the presence of archeological resources). Work limits in the vicinity of important cultural resources would be clearly defined.

Work crews would be educated about the sensitivity and importance of cultural sites and about the need to protect any cultural/archeological resources encountered. This would include instructions for notifying appropriate park staff and other required agencies if cultural/archeological resources are discovered.

The use of all-terrain vehicles (with spark arrestors) to access project areas while the ground is frozen or is too dry to be easily disturbed would be cleared in advance by the park superintendent and not allowed near any known cultural site.

If Alternative B (the current preferred alternative) were chosen:
This alternative focuses on the hunting of elk on public and private lands outside the park to reduce and maintain the park's elk population. Initial reduction efforts are expected to last about five years with maintenance activities conducted thereafter for the life of the plan. The fence line along the southwest portion of the park boundary would be raised to a height of 7 feet, consistent with the remainder of the park fencing. Gates that can be opened and closed would be installed within certain areas of the existing boundary fence to encourage elk movement. Depending on elk survey results, the gates would be manipulated (opened or closed) to ensure that the target number of elk are outside the park during hunting season. Hazing may be required to ensure the appropriate number of animals leave the park.

Areas elk would use to reach the gates would be inventoried for cultural resources within 200 square feet of the gate on both sides of the fence prior to the construction of the gate. If cultural resources were found, the gate location would be moved.

If Alternative C were chosen:
Areas impacted by elk traveling to reach the corrals would be the same as that used annually by bison during the park's bison round-up.

If Alternative D were chosen:
Carcasses would not be dragged and ATV use would follow the above guidelines.

7. **Supporting Study Data**: (attach if feasible; if action is in a plan, EA or EIS, give name and project or page number):

Draft Elk Management Plan and Environmental Impact Statement

8. **Attachments:** [ ] Maps [ ] Archeological survey, if applicable [ ] Drawings [ ] Specifications [ ] Photographs [ ] Scope of Work [ ] Site plan [ ] List of Materials [ ] Samples [X]Other

Prepared by Tom Farrell Date 7.17.8 Telephone 605/745-1130
Tom Farrell/Chief of Interpretation

B. **REVIEWS BY CULTURAL RESOURCE SPECIALISTS**

The park 106 coordinator requested review by the park's cultural resource specialist/advisers as indicated by check-off boxes or described below:

SPECIALISTS: Your comments here (or attached) show that you have reviewed this proposal for conformity with requirements of Section 106, with the 1995 Servicewide PA (if applicable), and applicable parts of the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, NPS Management Policies, and NPS-28, and have given your best professional advice about this project and the issues relevant to the Section 106 process, including identification and evaluation of historic properties and further consultation needs.

[X] ARCHEOLOGIST
Name: ~~Doug Scott~~(?) Ralph Harvey
Date: 9/2/05
Comments:

Check if project does not involve ground disturbance [ ]
Assessment of Effect: ___No Effect ___✓No Adverse Effect ___Adverse Effect
_Programmatic Exclusion
Recommendations for conditions or stipulations:

[ ] CURATOR
Name:
Date:
Comments

Assessment of Effect: ___No Effect ___No Adverse Effect ___Adverse Effect ___Programmatic Exclusion
Recommendations for conditions or stipulations:

[X] ETHNOGRAPHER
Name: Mike Evans
Date: 8/18/08
Comments:

MJE

Assessment of Effect: ___No Effect ✓No Adverse Effect ___Adverse Effect ___Programmatic Exclusion
Recommendations for conditions or stipulations:

[ ] HISTORIAN
Name:
Date:
Comments:

Assessment of Effect: ___No Effect ___No Adverse Effect ___Adverse Effect ___Programmatic Exclusion
Recommendations for conditions or stipulations:

[ ] HISTORICAL ARCHITECT:
Name:
Date:
Comments:

Assessment of Effect: ___No Effect ___No Adverse Effect ___Adverse Effect ___Programmatic Exclusion
Check if project meets Secretary's Standards [ ]
Recommendations for conditions or stipulations:

[X] HISTORICAL LANDSCAPE ARCHITECT
Name: Maria McEnaney
Date: 9/9/08
Comments:

none

Assessment of Effect: ___No Effect ___√___No Adverse Effect ___Adverse Effect ___Programmatic Exclusion
Check if project meets Secretary's Standards [ ]
Recommendations for conditions or stipulations:

[ ] OTHER ADVISERS
Name:
Title or area of specialty:
Date:

Comments:

Assessment of Effect: ___No Effect ___No Adverse Effect ___Adverse Effect ___Programmatic Exclusion
Recommendations for conditions or stipulations:

C. **PARK 106 COORDINATOR REVIEW AND RECOMMENDATIONS** (completed by the park Section 106 coordinator)

1. **Assessment of Effect** :

_____No Effect ___X___No Adverse Effect _____Adverse Effect

2. **Compliance requirements:** (The following is the park's assessment of Section 106 process needs and requirements for this undertaking.):

[X] A. STANDARD 36 CFR PART 800 CONSULTATION
Further consultation under 36 CFR Part 800 is needed.

[ ] B. PROGRAMMATIC EXCLUSION UNDER THE 1995 SERVICEWIDE PROGRAMMATIC AGREEMENT (PA)
The above action meets all conditions for a programmatic exclusion under Stipulation IV of the 1995 Servicewide PA for Section 106 compliance.
APPLICABLE EXCLUSION: Exclusion _____ [Specify 1-13 or IV.C addition to the list of exclusions.]

[ ] C. PLAN-RELATED UNDERTAKING
Consultation and review of the proposed undertaking were completed in the context of a plan review process, in accordance with the 1995 Servicewide PA and 36 CFR Part 800.
Specify plan/EA/EIS:

[ ] D. UNDERTAKING RELATED TO ANOTHER AGREEMENT
The proposed undertaking is covered for Section 106 purposes under another document such as a statewide agreement established in accord with 36 CFR Part 800.7 or counterpart regulations.
Specify:

[ ] E. STIPULATIONS/CONDITIONS
Following are listed any stipulations or conditions necessary to ensure that the assessment of effect above is consistent with 36 CFR Part 800 criteria of effect or to avoid or reduce potential adverse effects.

Recommended by Park Section 106 coordinator:

Signature Tom Farrell 7.10.08 Date
Tom Farrell, Chief of Interpretation

D. **SUPERINTENDENT'S APPROVAL**

The proposed work conforms to NPS Management Policies and DO-28 and I have reviewed and approve the recommendations, stipulations or conditions noted in Section C of this form.

Signature for Steve Schmidt Date 7-17-08
Vidal Davila, Superintendent

South Dakota Department of Tourism and State Development

August 4, 2008

RECEIVED
AUG 0 8 2008
Wind Cave National Park

Mr. Vidal Davila
Superintendent
Wind Cave National Park
RR 1 Box 190
Hot Springs SD 57747

SECTION 106 PROJECT CONSULTATION – EVALUATION
Project: 080721001F – Draft Elk Management Plan and Environmental Impact Statement, Wind Cave National Park
Location: Custer County
(NPS)

Dear Mr. Vidal:

Thank you for the opportunity to comment on the above referenced undertaking pursuant to Section 106 of the National Historic Preservation Act of 1966 (as amended). The South Dakota Office of the State Historic Preservation Officer (SHPO) concurs with your determination regarding the effect of the proposed undertaking on the non-renewable cultural resources of South Dakota.

We have made this consensus determination based on the information provided in your correspondence and document entitled "Wind Cave National Park Draft Elk Management Plan and Environmental Impact Statement," received on July 21, 2008. We concur with the determination of No Adverse Effect for this undertaking based on the following stipulations. Stipulation 1) Wind Cave National Park complies with 36 CFR part 800 – Protection of Historic Properties for all undertaking that have the potential to effect historic properties. Stipulation 2) all unevaluated and eligible properties are avoided by ground disturbing activities associated with the management plan. Stipulation 3) submit all relevant information concerning the identification of historic properties by other consulting parties.

If historic properties are discovered or unanticipated effects on historic properties are found after the agency official has completed the Section 106 process, the agency official shall avoid, minimize or mitigate the adverse effects to such properties and notify the

Office of Tourism
Governor's Office of Economic Development
Tribal Government Relations
711 E Wells Ave / Pierre, SD 57501-3369
Phone: 605-773-3301 / Fax: 605-773-3256
travelsd.com / sdgreatprofts.com / sdtribalrelations.com

South Dakota Arts Council
800 Governors Dr. / Pierre, SD 57501-2294
Phone: 605-773-3131 or 1-800-423-6665 in SD
Fax: 605-773-6962
sdac@state.sd.us / sdarts.org

South Dakota State Historical Society
900 Governors Dr. / Pierre, SD 57501-2217
Phone: 605-773-3458 / Fax: 605-773-6041
sdhistory.org

South Dakota Housing Development Authority
PO Box 1237 / Pierre, SD 57501-1237
Phone: 605-773-3181 / Fax: 605-773-5154
sdhda.org

South Dakota Great Faces, Great Places

SHPO/ THPO, and Indian tribes that might attach religious and cultural significance to the affected property within 48 hours of the discovery, pursuant to 36 CFR part 800.13.

Concurrence of the SHPO does not relieve the Federal agency official from consulting with other appropriate parties, as described in 36CFR Part 800.2(c).

Should you require additional information, please contact Paige Hoskinson Olson, Review & Compliance Coordinator, at (605) 773-6004. Your concern for the non-renewable cultural heritage of our state is appreciated.

Sincerely,

Jay D. Vogt
State Historic Preservation Officer

P. Hoskinson Olson

Paige Hoskinson Olson
Review & Compliance Coordinator

APPENDIX L

South Dakota State Veterinarian Consultation Letter
Preparation of Elk Management Plan for Wind Cave National Park

United States Department of the Interior
NATIONAL PARK SERVICE
WIND CAVE NATIONAL PARK
RR1, BOX 190
HOT SPRINGS, SOUTH DAKOTA 57747

IN REPLY REFER TO:

L7617 (WICA-RM)

May 12, 2004

Dr. Sam D. Holland, State Veterinarian
Animal Industry Board
411 South Fort Street
Pierre, SD 57501

Subject: Preparation of Elk Management Plan and Bison Management Plan for Wind Cave National Park

Dear Dr. Holland:

Wind Cave National Park (WICA) is planning to prepare an Elk Management Plan and a Bison Management Plan with the attendant environmental compliance documentation. With the Elk Management Plan we are anticipating the preparation of an Environmental Impact Statement and with the Bison Management Plan we are anticipating the preparation of an Environmental Assessment.

Wind Cave National Park was established in 1903. The Park is made up of 28,295 acres of mixed grass prairie and ponderosa pine forest. By the time WICA was established, both bison (Bison bison) and elk (Cervus elaphus), the major natural grazers, had been extirpated from the Black Hills area. Between 1911 and 1916 elk were reintroduced into the park from Jackson Hole, Wyoming and Yellowstone National Park. Park records are unclear as to the first reintroduction, but by 1916 there were approximately 70 elk in the park. In 1913, fourteen bison donated by the Bronx Zoo were reintroduced to the park. In subsequent years animals were obtained from Yellowstone National Park.

The park is surrounded by a combination of 44 miles of 7' high and four miles of five feet high woven wire fence which is intended to keep bison from wandering out of the Park and to deter the movement of elk in and out of the Park. While bison remain in the park year-round, there are some elk that leave the Park on a daily or seasonal basis while others remain in the Park their entire lives. Most of the elk jump the fence in the southwestern corner of the Park where the shorter section of fence is located. This section of fence was originally designed to provide ingress and egress of elk from the Park. Some of the elk that

leave the Park are harvested, but this limited reduction cannot be relied upon to control the entire population of elk utilizing the Park.

Vegetative surveys conducted in the late 1950s and early 1960s determined that park rangelands were in a state of overuse by elk and bison and led to the establishment of a management population of 350-400 elk and 350-400 bison. In the mid 1950s Park managers killed approximately 700 elk in an effort to control population. In recent years, the Park has been operating under a 1980 Environmental Assessment and a 1994 Elk Management Strategy, both of which call for live trapping and relocating of elk to maintain a population between 350-400 animals. The current elk population (estimated to be 700 in February 2004) far exceeds this management capacity. Park management estimates an annual population increase of 20-25% in the elk herd. Within 3 years the elk population could be 1200-1300.

On July 26, 2002, the Director of the NPS issued a memo to the Parks stating that "deer or elk will not be translocated from areas where CWD (Chronic Wasting Disease) is known to occur". In November 2002 a CWD positive elk was found in the Park. Now that the Park has a confirmed case it can no longer use the management option of trapping and relocating live elk as the means of controlling its elk population. Until the Park develops an Elk Management Plan and EIS it will not be able to effectively manage its elk population over the long-term.

The Park has been operating under a Bison Management Strategy prepared in the early 1990s, which calls for live trapping and relocating of bison to maintain a population between 350-400 animals. The current bison population (estimated to be 400 in October 2003) is still within the management capacity.

Management plans are needed for both species to address new concerns for management (i.e., CWD in elk) since the original strategies were prepared. The plans and environmental documents will address population control alternatives within the Park including lethal means, contraceptives, hazing, no action, etc. The plans will also deal with the development of a long term management policy and surveillance program for diseases, define additional research needs, and for elk, depredation problems outside the Park, and a discussion of raising or lowering the boundary fence.

We have begun work on these plans and the associated environmental documents that will study and assess the impacts to both natural and cultural resources, and determine any required mitigation. We believe that your participation will result in better planning for resource management, and will help ensure that your concerns are adequately considered during the development of these plans and environmental studies. As soon as they are completed, copies of the draft plans and environmental documents will be forwarded to you for review and comment. We look forward to receiving your input on our plans and any concerns you have about these projects. We would be pleased to discuss this project further, either by telephone or in a meeting.

If you have any questions, please contact me or Dan Foster, our point of contact for these plans. We can both be reached at (605) 745-4600.

Sincerely,
/S/ Linda L. Stoll

Linda L. Stoll
Superintendent

APPENDIX M

Government-to-Government Consultation Letter
Preparation of Elk Management Plan for Wind Cave National Park

United States Department of the Interior
NATIONAL PARK SERVICE
WIND CAVE NATIONAL PARK
RR1, BOX 190
HOT SPRINGS, SOUTH DAKOTA 57747

IN REPLY REFER TO:

L7617 (WICA-RM)

May 11, 2004

Mr. Duane Big Eagle, Chairman
Crow Creek Sioux Tribal Council
P.O. Box 50
Fort Thompson, SD 57339

Subject: Government-to-Government Consultation, Preparation of Elk Management Plan and Bison Management Plan for Wind Cave National Park

Dear Mr. Big Eagle:

Wind Cave National Park (WICA) is planning to prepare an Elk Management Plan and a Bison Management Plan with the attendant environmental compliance documentation. With the Elk Management Plan we are anticipating the preparation of an Environmental Impact Statement and with the Bison Management Plan we are anticipating the preparation of an Environmental Assessment.

Wind Cave National Park was established in 1903. The Park is made up of 28,295 acres of mixed grass prairie and ponderosa pine forest. By the time WICA was established, both bison (Bison bison) and elk (Cervus elaphus), the major natural grazers, had been extirpated from the Black Hills area. Between 1911 and 1916 elk were reintroduced into the park from Jackson Hole, Wyoming and Yellowstone National Park. Park records are unclear as to the first reintroduction, but by 1916 there were approximately 70 elk in the park. In 1913, fourteen bison donated by the Bronx Zoo were reintroduced to the park. In subsequent years animals were obtained from Yellowstone National Park.

The park is surrounded by a combination of 44 miles of 7' high and four miles of five feet high woven wire fence which is intended to keep bison from wandering out of the Park and to deter the movement of elk in and out of the Park. While bison remain in the park year-round, there are some elk that leave the Park on a daily or seasonal basis while others remain in the Park their entire lives. Most of the elk jump the fence in the southwestern corner of the Park where the shorter section of fence is located. This section of fence was originally designed to provide ingress and egress of elk from the Park. Some of the elk that

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Vegetative surveys conducted in the late 1950s and early 1960s determined that park rangelands were in a state of overuse by elk and bison and led to the establishment of a management population of 350-400 elk and 350-400 bison. In the mid 1950s Park managers killed approximately 700 elk in an effort to control population. In recent years, the Park has been operating under a 1980 Environmental Assessment and a 1994 Elk Management Strategy, both of which call for live trapping and relocating of elk to maintain a population between 350-400 animals. The current elk population (estimated to be 700 in February 2004) far exceeds this management capacity. Park management estimates an annual population increase of 20-25% in the elk herd. Within 3 years the elk population could be 1200-1300.

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The Park has been operating under a Bison Management Strategy prepared in the early 1990s, which calls for live trapping and relocating of bison to maintain a population between 350-400 animals. The current bison population (estimated to be 400 in October 2003) is still within the management capacity.

Management plans are needed for both species to address new concerns for management (i.e., CWD in elk) since the original strategies were prepared. The plans and environmental documents will address population control alternatives within the Park including lethal means, contraceptives, hazing, no action, etc. The plans will also deal with the development of a long term management policy and surveillance program for diseases, define additional research needs, and for elk, depredation problems outside the Park, and a discussion of raising or lowering the boundary fence.

The Park is aware that American Indians value Wind Cave National Park as a very special place, so we want to be sure that the projects are evaluated as per your concerns. Therefore, this letter is to formally initiate Government-to-Government consultation in accordance with legislation, Executive Orders, regulations, and policy, including sections 101 and 106 of the National Historic Preservation Act of 1966 as amended, 36 CFR 800, National Park Service Management Policies and Director’s Orders 28, Cultural Resources Management and 77, Natural Resource Management.

We have begun work on these plans and the associated environmental documents that will study and assess the impacts to both natural and cultural resources, and determine any required mitigation. We believe that your participation will result in better planning for resource management, and will help ensure that the resources valued by your tribe are adequately considered during the development of these plans and environmental studies. As soon as they are completed, copies of the draft plans and environmental documents will be forwarded to your tribe for review and comment. We look forward to receiving your input on our plans and any concerns you have about these projects. We would be pleased to discuss this project further, either by telephone or in a meeting.

If you have any questions, please contact me or Dan Foster, our point of contact for these plans. We can both be reached at (605) 745-4600.

Sincerely,

/S/ Linda L. Stoll

Linda L. Stoll
Superintendent

Tribes letter sent to:

Mr. Duane Big Eagle, Chairman
Crow Creek Sioux Tribal Council
P.O. Box 50 Fort Thimpson, SD 57339

Mr. White Buffalo Head, Chairman
Ponca Tribe of Oklahoma
20 White Eagle Drive
Ponca City, OK 74601

Mr. Alonzo Chalepah, Chairman
Apache Tribe of Oklahoma
P.O. Box 1220
Anadarko, OK 73005

Mr. Charles Colombe, President
Rosebud Sioux Tribal Council
P.O. Box 430
Rosebud, SD 57570

Mr. Harold Frazier, Chairman
Cheyenne River Sioux Tribe
P.O. Box 590
Eagle Butte, SD 57625

Mr. Tex Hall, Chairman
Three Affiliated Tribes Business Council
HC 3, Box 2
New Town, ND 58763

Mr. Burton Hutchinson, Chairman
Arapaho Business Committee
P.O. Box 396
Fort Washakie, WY 82514

Mr. Michael Jandreau, Chairman
Lower Brule Sioux Tribal Council
P.O. Box 187
Lower Brule, SD 57548

Mr. John Morales, Chairman
For Peck Tribal Executive Board
P.O. Box 1027
Poplar, MT 59255

Mr. Charles Murphy, Chairman
Standing Rock Sioux Tribal Council
P.O. Box D
Fort Yates, ND 58538

Mr. Mark Peniska, Chairman
Ponca Tribe of Nebraska
P.O. Box 288
Niobrara, NE 68760

Ms. Geri Small, President
Northern Cheyenne Tribal Council
P.O. Box 128
Lame Deer, MT 59043

Mr. Robert Tabor, Chairman
Cheyenne-Arapaho Tribes of Oklahoma
P.O. Box 38
Concho, OK 73022

Mr. Roger Trudell, Chairman
Santee Sioux Tribal Council
108 Spirit Lake Ave W
Niobrara, NE 68760-7219

Mr. John Yellow Bird Steele, President
Oglala Sioux Tribal Council
P.O. Box H
Pine Ridge, SD 57770

Mr. Tim Mentz, Historic Preservation Officer
Standing Rock Sioux Tribe
P.O. Box D
Fort Yates, ND 58538

Mr. Jim Picotte, Historic Preservation Officer
Cheyenne River Sioux Tribe
P.O. Box 590
Eagle Butte, SD 57625

Mr. Ben Speak Thunder, President
Fort Belknap Community Council
RR1, Box 66
Harlem, MT 59526

Ms. Madonna Archambeau, Chairperson
Yankton Sioux Tribal Bus. & Claims Com.
P.O. Box 248
Marty, SD 57361

Mr. James Crawford, Chairman
Sisseton-Wahpeton Sioux Tribal Council
P.O. Box 509
Agency Village, SD 57262

Mr. Thomas Ranfranz, President
Flandreau Santee Sioux Executive Committee
P.O. Box 283
Flandreau, SD 57028

APPENDIX N

Comment Response Report

Pursuant to the *National Environmental Policy Act* (NEPA), its implementing regulations, and National Park Service (NPS) guidance on meeting the Service's NEPA obligations, the park must assess and consider comments submitted on the draft Environmental Impact Statement (EIS) and provide responses. This appendix outlines and describes how the NPS considered public comments and provides the necessary responses to those comments.

The Environmental Protection Agency Notice of Availability (NOA) was published on June 20, 2008. The publication of the NOA initiated a 60-day public comment period.

Correspondence received during the public comment period included letters, a fax, electronic mail, comments dictated at public meetings, and comments on the NPS Planning, Environment and Public Comment (PEPC) website. The park received correspondence from 24 individuals, 2 tribal governments, 2 non-governmental agencies, 2 federal government agencies, 2 state government agencies, and 1 conservation/ preservation group. The correspondence contained 167 comments on various topics. All correspondence received during the public comment period may be viewed at the park headquarters during regular business hours.

At the close of the public comment period, the NPS began analyzing the correspondence received. Content analysis consisted of a five-step process:

1. developing a coding structure
2. employing a comment database for comment management
3. reading and coding public comments
4. interpreting and analyzing the comments to identify issues and themes
5. preparing this comment summary

A coding structure was developed to help sort comments into logical groupings, or topics. The coding structure was derived from an analysis of the range of topics discussed during internal NPS scoping, past planning documents, and the comments themselves. The coding structure was designed to capture all comment content rather than to restrict or exclude any ideas. Each comment was categorized by topic using the established coding structure.

The comments were identified as substantive or non-substantive as they were being coded, according to criteria described in the Council on Environmental Quality regulations (40 CFR 1500). These criteria state that substantive comments raise an issue regarding law or regulation, agency procedure or performance, compliance with stated objectives, validity of impact analyses, or other matters of practical or procedural importance. Non-substantive comments offer opinions or provide information not directly related to the issues or impact analysis. Non-substantive comments were acknowledged and considered, but do not require responses from the NPS.

The majority of comments received focused on various aspects of the alternatives proposed in this plan/EIS.

Concern statements were developed by code to summarize the views expressed in the substantive comments. From those substantive comments, concern statements were developed. The NPS then developed response statements addressing each concern statement. This report provides the concern statements, the representative comments that led to the development of those concern statements, and the NPS responses to these substantive comments.

Reading, coding, and analyzing comments helps the NPS decide if substantive issues raised by the public warrant further modification and analysis of the alternatives, issues, and impacts. Comment analysis also helped the NPS identify any text in the draft plan/EIS where clarification was helpful or factual errors needed correction. If editorial clarifications or factual changes were required, the text changes are reflected in this *Final Elk Management Plan and Environmental Impact Statement.*

The indices in this report provide commenters with various means to track the way NPS addressed their comments. Each correspondence was assigned an ID number that can be found in Index A. Next to the ID number are all of the codes that NPS assigned to each individual correspondence. All of these comments were then used to develop the concern statements and responses. In addition, Index B provides an index broken out by code to show which organizations/individuals provided comments related to each code. Index C provides the full text of all of the letters submitted during the public comment period.

COMMENT DISTRIBUTION BY CODE

(Note: Each comment may have multiple codes. As a result, the total number of comments may be different than the actual comment totals)

Code	Description	Number of Comments
AL2005	Alternative B: Support Hunting Outside the Park	14
AL2015	Alternative B: Oppose hunting outside the park	3
AL2100	Alternative B: Modifications to SDGFP-Managed Hunt (seasons, hunting units) and/or Elk License Permitting Process Related to Elk Management	4
AL2105	Alternative B: Oppose SDGFP Management of Hunting Outside the Park	2
AL2110	Alternative B: Support SDGFP Management of Hunting Outside the Park	3
AL2200	Alternative B: Coordinate with Adjacent Landowners Regarding Hunting Outside the Park	4
AL2205	Alternative B: Coordinate with Adjacent Landowners Regarding Hunting Outside the Park	1
AL2505	Alternatives: Support Hazing/Movement of Elk Out of Park	3
AL2510	Alternative B: Support Use of Volunteer Hazers to Move Elk Out of Park	2
AL2550	Alternative B: Oppose hazing and/or Methods of Moving Elk Out of Park	8
AL2555	Alternative B: Public Reaction to Hazing Elk Toward Hunters Outside Park	1
AL2600	Alternative B: Effectiveness of Fence in Preventing Return of Elk to Park During Hunting Season	1
AL2610	Alternative B: Feasibility/Effectiveness of Alternative	1
AL2655	Alternative B: Support Appropriate and Timely Fence Modification/Manipulation	1

AL3005	Alternative C: Support	2
AL3100	Alternative C: Support Donation of Meat of CWD-negative carcasses (avoid waste)	1
AL3105	Alternative C: Support Donation of Meat of CWD-negative carcasses (avoid waste)	3
AL3150	Alternative C: Oppose organized distribution of elk meat	1
AL4005	Alternative D: Support sharpshooting	5
AL4010	Alternative D: Support donation of meat of CWD-negative carcasses (avoid waste)	3
AL4100	Alternative D: Support sharpshooting as maintenance tool	1
AL4200	Alternative D: Support sharpshooting with use of trained/skilled volunteers	4
AL4300	Alternative D: Use sharpshooting as preferred method for initial reduction	1
AL4400	Alternative D: Support sharpshooting as second choice for initial reduction, after hunting outside the park	3
AL5000	Alternative E: Sterilization	8
AL5005	Alternative E: Support use of sterilization	5
AL5006	Alternative E: more research needed	1
AL6000	Alternative F: Fertility control agents	4
AL6005	Alternative F: Support use of fertility control agents	5
AL6006	Alternative F: more research needed	1
AL6010	Alternative F: Oppose use of fertility control agents	1
AL7000	Alternatives: New alternatives or elements	10
AL8005	Alternatives General: Support elk management	8
AL8055	Alternatives General: Oppose all proposed management actions	2
AL8075	Alternatives General: Oppose all lethal control management actions	5
AL8100	Alternatives General: Support elk management--equal emphasis on male and female elk	3
AL8200	Alternatives General: Cost of elk management	2
AL8305	Alternatives General: Track/test carcasses for CWD	1
AL8405	Alternatives General: Disposition of CWD-positive carcasses	1
AL8505	Alternatives General: Support use of adaptive management	2
AL9100	Alternatives Considered but Dismissed: Hunting in the Park	13
AL9105	Alternatives Considered but Dismissed: Support hunting in the Park	5
AL9130	Alternatives Considered but Dismissed: Hunting in the Park--tribal hunt	1
AL9200	Alternatives Considered but Dismissed: Trapping/roundup/translocation of elk to areas outside the Park	1

AL9300	Alternatives Considered but Dismissed: Reintroduction of elk predators to Park	5
AL9350	Alternatives Considered but Dismissed: Oppose reintroduction of elk predators to Park	2
AL9355	Alternatives Considered but Dismissed: Oppose reintroduction of elk predators to Park	5
AL9380	Alternatives Considered but Dismissed: Predator reintroduction deliberations	2
CR4005	Cultural Resources: Impacts of proposal and alternatives	2
E1000	Elk: Ungulate Disease	12
HS1000	Human Health and Safety: Human consumption/use of elk carcasses	4
HS4000	Human Health and Safety: Impacts of proposal and alternatives	2
MT1000	Miscellaneous Topics: Accuracy of data used for plan development	5
MT2000	Miscellaneous Topics: Public input/comment	3
PN1005	Purpose and Need: Support plan's stated purpose and need	1
PN1100	Purpose and Need: Disagree Forage Would Not Support Elk Population Growth	1
PO4000	Park Operations: Impacts of proposal and alternatives	1
SE4000	Socioeconomics: Impacts of proposal and alternatives--hunting outside Park (alternative B)	1
SE4050	Socioeconomics: Impacts of proposal and alternatives--agriculture/ranching	9
SE4055	Socioeconomics: Impacts of proposal and alternatives--agriculture/ranching	2
TE4000	Threatened and Endangered Species: Impacts of proposal and alternatives	1
VE1000	Visitor Experience: Impact of Proposal and Alternatives	1
VG1000	Vegetation: Condition	1
WH1000	Wildlife and Wildlife Habitat: General	2
WH3000	Wildlife and Wildlife Habitat: Ethical/humane treatment of elk	5
WH4000	Wildlife and Wildlife Habitat: Impacts of proposal and alternatives	4
WH8000	Wildlife and Wildlife Habitat: Ecosystem Processes	1
WQ1000	Water Resources: Water quality and quantity	1
Total		**168**

CORRESPONDENCE SIGNATURE COUNT BY ORGANIZATION TYPE

Organization Type	Number of Correspondences
Federal Government	2
Tribal Government	2
Conservation/Preservation	1
State Government	2
Non-Governmental	2
Unaffiliated Individual	24
Total	33

CORRESPONDENCE DISTRIBUTION BY STATE

State	Percentage	Number of Correspondences
SD	78.79%	26
NJ	6.06%	2
Unknown	3.03%	1
MN	3.03%	1
DC	3.03%	1
CO	3.03%	1
Total		33

CONCERN RESPONSE REPORT

AL2100 - Alternative B: Modifications to SDGFP-Managed Hunt (seasons, hunting units) and/or Elk License Permitting Process Related to Elk Management

CONCERN STATEMENT: Commenters had various suggestions regarding modifying a SDGFP-managed hunt outside of the park including the number and length of seasons and methods for distributing hunting tags.

Representative Quote(s):

Corr. ID: 7 **Organization:** *Not Specified*

Comment ID: 87234 **Organization Type:** Unaffiliated Individual
Representative Quote: Whether it be the height of the fence or gates or what other remedy you eventually come up with to get at this migration pattern- I would like to leave you with my recommendation to those responsible for setting the hunting seasons in these areas. For those of us in perhaps the last five years who have applied in good faith that decent numbers were there, spent a considerable amount of time pre-season scouting, and put a good effort in the field we should be given some kind of preference in whatever the reduction plan that evolves, or in the next seasons applications. I am now 73 years of age, still have my health to enjoy the outdoors- I doubt I will ever get the chance to hunt elk in the Black Hills and draw a license under your present system of licensing. I feel many of us have paid a price and at the same time management people have looked the other way.

Corr. ID: 8 **Organization:** *Not Specified*
Comment ID: 87232 **Organization Type:** Unaffiliated Individual
Representative Quote: The GF and P would likely have the best ideas for how to spread the seasons out of the park over several weeks, but if I could suggest: many

short seasons rather than one huge donnybrook. This would be potentially safer and attract fewer PETA members to protest in their fawn elk costumes.

Corr. ID: 24 **Organization:** USDA Farm Service Agency
Comment ID: 89092 **Organization Type:** Federal Government
Representative Quote: The GF&P should consider offering an increased number of elk hunting permits for the units that are covered by the elk release. These additional licenses would allow for the herd reduction that cannot be accomplished within the Wind Cave National Park boundaries at this time. This reduction would also reduce the depredation load on the private land owners adjacent to the Park.

Response: The National Park Service has worked jointly with the South Dakota Game, Fish and Parks (SDGFP) from the beginning of this planning effort. The SDGFP will be setting the number and length of seasons along with the methods and preferences for distributing hunting tags outside of the park. This information will be passed on to the SDGFP for their consideration.

AL2200 - Alternative B: Coordinate with Adjacent Landowners Regarding Hunting Outside the Park

CONCERN STATEMENT: Commenters stressed the need to coordinate with landowners surrounding the park and the SDGFP regarding elk management.

Representative Quote(s):

Corr. ID: 24 **Organization:** USDA Farm Service Agency
Comment ID: 87094 **Organization Type:** Federal Government
Representative Quote: Our position would be that any planned release of a large number of elk to surrounding lands should also include the cooperation of the South Dakota Game Fish & Parks (GF&P)Department.

Response: As described in the plan/EIS (see the plan/EIS, page 28), hunting activities within the two hunting units (H3 and H4) which flank the park would be administered by the SDGFP according to its current regulatory authority granted in SDCL 41-2-18. This SDGFP effort includes issuance of all hunting permits, as well as the coordination with affected landowners within these hunting units. As explained on page 30 of this plan/EIS, implementation of this alternative could involve increased hunter access to private lands within H3 and H4 and SDGFP would work with neighboring landowners to facilitate this increased access.

AL2510 - Alternative B: Support Use of Volunteer Hazers to Move Elk Out of Park

CONCERN STATEMENT: Commenters stated that volunteers could assist with hazing elk out of the park, and this method would be cheaper and safer than other techniques mentioned in the DEIS.

Representative Quote(s):

Corr. ID: 8 **Organization:** *Not Specified*
Comment ID: 87230 **Organization Type:** Unaffiliated Individual
Representative Quote: Suggest or require successful hunters who draw a tag for out of the park hunting to "donate" 1/2 day towards hazing activity in the park. The cost would be in the organizers salaries only, and maybe a few pots of coffee to get the hazers going in the morning. RMEF [Rocky Mountain Elk Foundation] might even

donate a few organizers for the hazing crews in return for publicity, photo ops, etc. Volunteer hazers would be cheaper and safer than helicopters, planted explosives, loud bad rock music or some of the other ideas I have read. Strongly worded disclaimers (statements of hold harmless) and physician statements as to acceptable levels of health to physically participate would likely be needed to prevent the activities from attracting plaintiff attorneys.

Response: The definition of "skilled volunteer" was clarified in the final plan/EIS to include the use of volunteers for activities related to elk management aside from sharpshooting, when NPS determines that additional personnel may be necessary to carry out the actions described in the final plan/EIS. Cost, efficiency, and effectiveness would be the factors that determine when supplemental personnel are needed. See page 27 as well as the Glossary for text changes.

AL2550 - Alternative B: Oppose hazing and/or Methods of Moving Elk Out of Park

CONCERN STATEMENT: Commenters expressed concern over a number of elements regarding hazing/moving elk out of the park, including the concern that it will be difficult and/or expensive to hunt elk on private land, the concern that moving elk onto private lands will result in increased depredation on cattle feed, and the fact that the South Dakota Animal Industry Board code 40-5-8 regulates the release or translocation of any animal to ensure documentation as disease-free.

Representative Quote(s):

Corr. ID: 5 **Organization:** RMEF [Rocky Mountain Elk Foundation]
Comment ID: 87235 **Organization Type:** Unaffiliated Individual
Representative Quote: I have read the proposal to allow Elk to leave the park to be harvested by hunters in the next year or two. Please don't let that happen East of Wind Cave Park as that is all private land, and the landowners will not allow any hunting or if they do, they will charge you an arm and a leg. Release them on the West side of the park onto public land.

Corr. ID: 24 **Organization:** USDA Farm Service Agency
Comment ID: 87093 **Organization Type:** Federal Government
Representative Quote: We understand that one option being considered is the possible release of 200 to 300 head of elk onto lands bordering the park. ...Our position is that this release of elk onto neighboring lands could cause severe overpopulation and increase elk herd depredation on grazing land and stock piled feed sources of private individuals.

Corr. ID: 33 **Organization:** South Dakota Animal Industry Board
Comment ID: 87025 **Organization Type:** State Government
Representative Quote: The statute below may be reviewed by WCNP prior to implementing actions including translocations other than those within the park:

40-5-8. Board powers in suppression of contagious diseases and parasites- Regulation of importation, release, sale, loan, lease, or distribution of animals- Violation as misdemeanor. If written notice is given to the owner or keeper of any animal that a

quarantine is established, the Animal Industry Board may take any action necessary to control, prevent, suppress, and eradicate any contagious, infectious, epidemic, and communicable disease and infestation of destructive parasites among the domestic and nondomestic animals of this state. The board may regulate or prohibit the importation, release to the wild, sale, loan, lease or other distribution or translocation or any animal into and within the state to ensure documentation as disease-free. The Animal Industry Board may regulate or prohibit such transactions between and among private entities, local government agencies, state government agencies, federal government agencies, and nonprofit and other corporations, including, but not limited to, game farms, game preserves, zoos, exhibitions, sales, humane societies, and rehabilitation facilities. A violation of this section is a Class 1 misdemeanor.

Source: SDC 1939, Section 40.0501; SL 1950 (SS), ch 9, section 1; SL 1982, ch 282, section 1; SL 1989, ch 349, Section 1; SL 1990, ch 325, section 35.

Response: Implementation of alternative B (hunting outside the park) would involve the installation of additional "spans of movable gates along the western and, to the extent possible, eastern boundaries of the park, with landowner consent" (see page 28 of the plan/EIS). These gates would be designed to allow elk to leave the park at certain times of year while discouraging their return in the fall during hunting season. Gates would be installed only in areas where landowners have given their approval. While the current preferred gate locations are along the western park boundary, if agreements with private landowners along the eastern park boundary are reached regarding hunting access, such locations would be considered for these movable gates. SDGFP would administer all hunting activities within Hunting Units 3 and 4, regardless of where movable gates are installed.

As described on page 126 of the plan/EIS, the SDGFP administers a series of programs designed to address wildlife depredation on private land throughout the state, including haylands, food plot, cable and stackyard contracts. The majority of private lands adjacent to the park are in agricultural use and some of these private landowners are eligible for state wildlife depredation programs (table 19, page 128). The program, managed by SDGFP, "includes private landowners, Custer State Park, Wind Cave National Park, U.S. Forest Service, Rocky Mountain Elk Foundation, Natural Resource Conservation Service, and South Dakota Resource Conservation and Forestry" (page 126).

Under alternative B (hunting outside the park), elk would be discouraged from returning to the safety of parklands during hunting season, thereby increasing hunting opportunities on lands adjacent to the park. The fact that more elk would be present on these lands adjacent to the park during this period could result in the temporary increase in depredation impacts on these private lands (page 265). Should this occur, SDGFP-administered hayland, food plot, cable, and stackyard contracts could be increased to offset depredation impacts. At the same time, SDGFP may choose to increase the number of elk hunting access agreements in areas within H3 and H4 which could further mitigate depredation impacts to surrounding lands (page 265). Depredation effects to lands adjacent to the park are expected to decrease over time as initial elk reduction activities are completed.

Regarding the Animal Industry Board's prohibition on the "release to the wild" of

animals without documentation as to their disease-free condition, it is the position of NPS that the park's elk population is a free-roaming herd and, as such, this plan does not propose their "release to the wild." This elk population is not currently confined within park boundaries and evidence of annual elk migration into and out of the park is substantiated in the plan/EIS (page 85).

AL3150 - Alternative C: Oppose organized distribution of elk meat

CONCERN STATEMENT: Commenters stated that the donation of elk meat is impractical due to cost and the logistics related to mandatory CWD testing.

Representative Quote(s):

Corr. ID: 8 **Organization:** *Not Specified*

Comment ID: 87227 **Organization Type:** Unaffiliated Individual
Representative Quote: Options that attempt to arrange distribution of the elk meat are too expensive (i.e. - Rapid City's $50 per pound venison, in previous reduction hunts) or impractical because of the presence of CWD.

Response: Although not a food safety test, CWD testing would be required before any meat was donated by the National Park Service to the public. Costs are dictated by the testing facilities and not the National Park Service. The park agrees, it is very costly to transport and have the elk slaughtered, processed, the meat packaged and distributed to the public. For these reasons, the park would find a partner that would bear the responsibility for this donation effort. The partner would take care of the logistics for the shipment/transport of live elk to the slaughter house, killing, processing, packaging/storage of meat, offal disposal, meat donation/distribution and necessary record-keeping (e.g., informed consent form requirements, distribution of meat records, etc.).

AL4010 - Alternative D: Support donation of meat of CWD-negative carcasses (avoid waste)

CONCERN STATEMENT: Commenters were opposed to incinerating elk carcasses under alternative D and thought that every effort should be made to donate the meat as it is in alternative C.

Representative Quote(s):

Corr. ID: 15 **Organization:** *Not Specified*

Comment ID: 87098 **Organization Type:** Unaffiliated Individual
Representative Quote: Alternative D - Would be my second choice, if you could find a facility that could handle a large number of elk, and the elk be tested and then donated. Donating the meat to a food bank would be a better alternative.

Corr. ID: 29 **Organization:** Safari Club International
Comment ID: 87051 **Organization Type:** Non-Governmental
Representative Quote: SCI and SCIF agree that the Park Service should try to donate elk meat to individuals or charities under Alternative C, if it is safe to do so (see Draft Elk Plan at 33–34), but suggest that the Park Service consider this option under Alternative D as well.

Response: The donation of meat in alternative D was considered but ultimately removed because of concerns over public health and logistics. These reasons are laid out in the plan/EIS on page 24 and summarized here. In alternative D, elk would be killed

by sharpshooters in sometimes remote sections of the park or over a wide geographic area in a given day. To prevent freezing (sharpshooting would take place during winter months), the carcasses would need to be removed quickly and brought to a central location where they would be hung in refrigerated conditions for a two-week period while waiting for chronic wasting disease (CWD) test results. If left in the field even for a few hours, the carcasses would be exposed to dirt, predation, and bacterial decomposition, making them a public health risk. The planning team assumed carcasses would be "sling-loaded" into harnesses carried by helicopters, a procedure that does not require landing but does involve personnel waiting at the site of each carcass to load it into position. Because helicopters could only load a few carcasses at a time, several trips may be needed to remove them from an area or from different areas in a day of sharpshooting. Additional public health concerns with distributing meat under alternative D include the potential for cross contamination of carcasses by those carrying CWD. As described in the plan/EIS (see page 34), the variables that could lead to cross contamination would be either highly controlled in alternative C (e.g., if a partner were available and live elk killed and their carcasses processed under indoor, sanitary conditions) or carcasses would be incinerated if a partner to handle these variables is not found. As noted above, these same factors are not controllable in alternative D, as shooting, gutting and testing all take place under field conditions. Carcasses would have been brought to a central location for testing and hung in a refrigeration truck as the park does not have a large locker. Those with CWD would be in close contact with "clean" carcasses. If they cannot be field dressed before helicopter pick up, they would also have been gutted at the central location near the refrigeration truck, another potential source of cross-contamination. If contamination did occur during any of these steps, it would not be something the NPS would be able to detect, as the CWD test would only show animals with the disease (when alive). The inability to ensure the meat was suitable for consumption and logistic problems made meat donation under alternative D not feasible.

AL4200 - Alternative D: Support sharpshooting with use of trained/skilled volunteers

CONCERN STATEMENT: Commenters stated that the use of skilled volunteers to assist in culling elk should be a component of alternative D.

Representative Quote(s):

Corr. ID: 29 **Organization:** Safari Club International

Comment ID: 87031 **Organization Type:** Non-Governmental

Representative Quote: SCI and SCIF have been leaders in support of the use of qualified volunteers from the hunting community assisting NPS management efforts of overpopulations of wildlife on NPS lands.... SDFGP also could be instrumental in qualifying volunteers to assist with culling activities under Alternative D. As is being demonstrated in Rocky Mountain National Park, SCI and SCIF could be called on to assist with management activities, whether it is hunting outside the Park or as volunteer sharpshooters within the Park.

Response: The use of skilled volunteers to assist in culling elk is included as a component of alternative D in the plan/EIS (see pages 38–40). Please see the response to AL 2510 for more information related to the use of skilled volunteers for elk management actions, and see also the glossary for the definition of "Skilled Volunteers."

CONCERN STATEMENT: Commenters questioned the degree to which using skilled volunteers from the hunting community would reduce the cost of alternative D (sharpshooting)?

Representative Quote(s):

Corr. ID: 29 **Organization:** Safari Club International

Comment ID: 87034 **Organization Type:** Non-Governmental
Representative Quote: ...a review of the analyzed impacts from the two alternatives reveals that Alternative D is a better second choice than Alternative C. The cost of Alternative D is estimated to be $646,000 for the life of the elk management plan, roughly 15-20 years. Draft Elk Plan at 48. It appears that the initial estimated cost of $470,000 could be reduced if the Park Service used skilled volunteers from the hunting community. SCI recommends that the Park Service include an estimate of initial costs using skilled volunteers for comparison purposes. The cost of Alternative C is estimated at $2,000,000 for the life of the plan. Id. This figure is significantly higher, with most of the increased cost coming in the maintenance phase.

Response: If skilled volunteers are used there are still direct costs that will be borne by the NPS as it relates to supervision, training, qualifying, background checks, fingerprinting, along with the need to train and re-qualify new volunteers throughout the control program. Volunteers would still be under the purview of the NPS and would require constant oversight by park employee(s). For example, within Theodore Roosevelt National Park Draft Elk Plan / EIS (page 238 of that EIS) a cost estimate is provided of an additional $68,668 per year (or 1 million dollars over 15 years) should skilled volunteers be used for direct reduction. Costs include the 5 to 10 seasonal employees needed to administer the skilled volunteer program.

There are many factors that go into the consideration for deciding upon an alternative and which alternative would be preferred over another. Cost (see this plan/EIS, page 48) is not the only factor used for deciding upon an alternative. For example, alternative C (roundup and live shipment or euthanasia) could accomplish the reduction goals within a few days while alternative D (sharpshooting) would likely take a few months whether it was using skilled volunteers, federal employees and/or authorized agents. Alternative C (roundup and live shipment or euthanasia) has already been successfully carried out in the park while sharpshooting is an unknown within the park.

AL4400 - Alternative D: Support sharpshooting as second choice for initial reduction, after hunting outside the park

CONCERN STATEMENT: Commenters expressed support for alternative D (sharpshooting) being the second choice for initial reduction if alternative B (hunting outside the park) did not meet elk population goals because it is more flexible as a backup strategy and is less expensive.

Representative Quote(s):

Corr. ID: 29 **Organization:** Safari Club International

Comment ID: 87035 **Organization Type:** Non-Governmental
Representative Quote: The sharpshooter method offers flexibility if there is a

need to reduce the elk population outside of regular hunting seasons, but a large-scale roundup operation is not called for. Once set up, a program using qualified volunteers and other sharpshooters could quickly and precisely address overpopulation needs. The experiences of the Park Service at Rocky Mountain National Park should help with setting up an efficient and well-run program at WCNP. In addition, the time of the year in which the initial, and presumably the maintenance, phase could occur is much greater with Alternative D than Alternative C. Id. at 59 (Alternative D, August to March; Alternative C, January to February).

Corr. ID: 29 **Organization:** Safari Club International
Comment ID: 87027 **Organization Type:** Non-Governmental
Representative Quote: SCI and SCIF make one substantive suggestion...SCI and SCIF suggest that the Park Service adopt or identify Alternative D (Sharpshooting, including using qualified volunteers) as the method to use if Alternative B (Hunting Outside the Park) does not provide the expected declines in elk population, whether for initial reductions or maintenance purposes. The Draft Elk Plan appears to identify Alternative C (Roundup and Live Shipment or Euthanasia) as the secondary method, Draft Elk Plan at vii, but also suggests that Alternative D would work well in conjunction with Alternative B. Id. at 25.

Response: As described in this plan/EIS (page 52), the effectiveness of the preferred alternative (alternative B, hunting outside the park) would be evaluated in coordination with SDGFP after two years of plan implementation. Should stated plan objectives not be met during the initial reduction phase (years one through five years of plan implementation), the plan/EIS describes alternative C (roundup and live shipment or euthanasia) as the "back-up" alternative for these initial reduction efforts. The choice of alternative C as a back-up option is based primarily on its proven efficiency in reducing the park's elk population. Past management actions involving roundup/translocation (page 9) have been accomplished in two to three days. Should it be determined that alternative B is not effectively meeting plan objectives, it will be imperative that the NPS take quick action to avoid further detrimental impacts to park resources related to elk over-population. Implementation of alternative C as a back-up plan would provide the most efficient option to decreasing the elk population quickly to stated plan levels.

By way of comparison, it is likely that the organization, training, and implementation of alternative D (sharpshooting) would require months to implement, resulting in more detrimental effects to park resources than would the implementation of alternative C as a back-up strategy. The NPS may choose to use sharpshooting "periodically and sparingly during the implementation of the preferred alternative if needed to balance subherds, displace elk, achieve more desirable sex or age ratios, etc." (page 55). Sharpshooting will still be considered a viable back-up option for maintenance efforts under alternative B.

AL5000 - Alternative E: Sterilization

CONCERN STATEMENT: Some commenters expressed concern over the time and costs associated with sterilization, while others thought that sterilization was the best maintenance tool, but should be used to treat both male and female elk.

Representative Quote(s):

Corr. ID: 9 **Organization:** South Dakota Stockgrowers Association
Comment ID: 87091 **Organization Type:** Non-Governmental
Representative Quote: After elk numbers are reduced to a manageable level, SDSGA supports alternative E, sterilization of remaining elk. However, we support sterilization of both males and females.

Corr. ID: 32 **Organization:** *Not Specified*
Comment ID: 87202 **Organization Type:** Unaffiliated Individual
Representative Quote: The option of sterilization as an alternative is ridiculous, for cost reasons, health hazards for other wildlife and possible health hazard for human use.

Response:

To control/reduce a wildlife population, productive females must be managed. Sterilizing the bulls would have little effect on reducing the reproduction or build up of elk herds in the future. Even if the technology were to become available for sterilizing bulls, it would not be practical nor make the most sense to sterilize them. From a safety standpoint, bulls are also the biggest and the most dangerous to deal with when handling.

The park is not interested in altering the behavior of the free roaming bulls. Watching and listening to bull elk during the fall breeding season is an important component of the visitor experience (page 45 of the plan/EIS) at Wind Cave National Park. It is the park's goal to avoid noticeable reduction in bulls "bugling," pursuing and herding cows, or challenges which would adversely affect wildlife behavior or visitor experience.

One of the constraints of the use of fertility control agents for elk reduction is the fact that there is ongoing movement of elk into and out of the park, depending on the time of year. There are many hundreds of elk outside the park that are unavailable for capture or treatment during the spring and summer, for example. Treated elk may also leave the park and be hunted, nullifying the expense and effort the park would put into contraception.

AL6000 - Alternative F: Fertility control agents

CONCERN STATEMENT:

Commenters expressed their support for fertility control, with one commenter noting it should only be used at some point in the future if the other alternatives were not meeting elk population objectives.

Representative Quote(s):

Corr. ID: 18 **Organization:** n/a

Comment ID: 87218 **Organization Type:** Unaffiliated Individual
Representative Quote: Gona con is no more stressful than live transport or murder of the elk. . . Permission to use gona con is easily obtainable. People take birth control, which is in the water. Why this paranoia about more birth control, which is in the water from human use. . . Gona con is more effective than 90% of drugs on the market in America today. presently it is approximately 76% effective, which is a good high number.

Corr. ID: 29 **Organization:** Safari Club International
Comment ID: 87045 **Organization Type:** Non-Governmental
Representative Quote: SCI and SCIF fully agree that if these methods (sterilization, fertility control agents--clarification added) are ever seriously considered in the future, the Park Service should consider them only for purposes of maintaining the population of elk in WCNP at some particular level. And they should be considered only if the Park Service concludes that Alternatives B, C, and D are not maintaining the populations sufficiently.

Response: To be considered feasible for the park's use as an elk management option, fertility control agents would need to meet several stated criteria (pages 44–45). These include appropriate regulatory approvals and certifications for use in elk as fertility control agents. Ideally, fertility agents used would require no withdrawal period for human consumption of hunted elk. However if a withdrawal period is prescribed for a specific fertility agent, it would either be administered so that the withdrawal period has expired before hunting begins, or all treated animals would be permanently marked to inform hunters of the treatment. Fulfillment to a lesser degree of stated criteria may be acceptable for specific fertility control agents if an investigational exemption from the appropriate regulatory agency is granted. While Gona con has been shown to be effective in various wildlife species (not elk), it is not currently approved for use in elk as a fertility control agent. Several research studies into its use with elk are currently underway or planned for the future which will be evaluated by the park once available.

Both alternatives E (contraception/sterilization) and F (fertility control) are analyzed in the plan/EIS solely for use in the maintenance of the elk population after initial reduction (alternatives B, C, and D). At this time, neither sterilization nor fertility control agents have been scientifically proven to effectively manage wildlife populations. The park will not use either of these alternatives for population maintenance unless future scientific studies prove them to be an effective and efficient means of elk population control and the preferred and adaptive management efforts fail to maintain elk population within the target range.

AL7000 - Alternatives: New alternatives or elements

CONCERN STATEMENT: Commenters suggested adding alternative elements involving hazing elk onto the Casey property as well as onto public lands adjacent to the park for hunting.

Representative Quote(s):

Corr. ID: 23 **Organization:** *Not Specified*
Comment ID: 87181 **Organization Type:** Unaffiliated Individual
Representative Quote: However, rather than just pushing the elk through gates in the park fence boundary to facilitate elk hunting outside the park, why not lay 100 to 200 yards of fencing down and haze or push the elk to the west into the Black Hills Forest and north along the Custer State Park boundary? Then after a selected number of elk have left Wind Cave, the fences be replaced. This would allow hunters to be able to harvest additional animals not only in the Black Hills but also Custer State Park via the South Dakota Game, Fish and Parks.

Corr. ID: 32 **Organization:** *Not Specified*

Comment ID: 87200 **Organization Type:** Unaffiliated Individual
Representative Quote: An option of opening up the Casey land would be looked at as a place for a separate Elk unit to have Elk pushed into and made a unit for hunting by the Game Fish and Parks.

Response: The preferred alternative (alternative B) already addresses this comment (# 87181). The focus of the alternative is on the hunting of elk on public and private lands outside the park to reduce and maintain the park's elk population. This would involve raising the fence along the southwest portion of the park boundary to a height of 7 feet, consistent with the remainder of the park fencing and installing gates that can be opened and closed in areas of the existing boundary fence to encourage elk movement. The gates would be manipulated to ensure that the target number of elk are outside the park during hunting season. Hazing may be required to ensure the appropriate number of animals leave the park. The SDGFP would administer the hunt, issue all hunting permits, and retain all fees. Gates/drop down sections of fence are planned on the west boundary (where most of the elk movement already occurs) and possibly on the east side of the park (where some movement has been documented).

Movement of elk onto the Casey lands does not appear to be part of the normal movement patterns of elk within Wind Cave National Park, therefore the park is not considering those adjacent lands in this plan. Custer State Park, to the north, is not interested in more elk being made available inside their park.

CONCERN STATEMENT: Commenters suggested using members of the hunting community to manage elk; and thought consideration should be given to allow them to keep a small portion of the meat.

Representative Quote(s):

Corr. ID: 29 **Organization:** Safari Club International

Comment ID: 87055 **Organization Type:** Non-Governmental
Representative Quote: Nothing in the statutes, regulations and policies that establish the authority of the National Park Service prevent the Park Service from utilizing members of the hunting community to assist an individual park and/or the state wildlife management authority in managing, culling or reducing an overabundant wildlife population on park land, much as the Park Service has used professional sharpshooters.

Corr. ID: 29 **Organization:** Safari Club International
Comment ID: 87059 **Organization Type:** Non-Governmental
Representative Quote: Similarly, Park Service Management Policies do not prevent the Park Service from utilizing members of the hunting community as agents of the Park Service or state wildlife management authority for a culling (i.e., non-hunting) operation. For example, policy provision 4.4.2.1, entitled "NPS Actions That Remove Native Plants and Animals" acknowledges the Service's use of "others to remove plants or animals" but does not restrict the term "others" to include only paid sharpshooters. The same policy provision recognizes the use of "destruction of animals by authorized agents," but does not restrict the term "authorized agents" to individuals who are paid for their sharpshooting skills.

Corr. ID: 29 **Organization:** Safari Club International
Comment ID: 87052 **Organization Type:** Non-Governmental
Representative Quote: The Rocky Mountain National Park Elk Plan contemplates that the meat harvested by qualified volunteers would be donated, with a small portion available to the volunteer. See ...Rocky Mountain National Park Elk Management Plan Record of Decision.... If it is feasible there, it should be feasible in WCNP.

Corr. ID: 29 **Organization:** Safari Club International
Comment ID: 87058 **Organization Type:** Non-Governmental
Representative Quote: The regulations that the Secretary of the Interior has promulgated for the purpose of administering the National Park System allow the Secretary or a Park Superintendent to manage a park's overabundant wildlife using individuals from the hunting community as a wildlife management resource. Although there are regulations, such as 36 C.F.R. Section 2.2 that restrict hunting activities on Park Service lands, such rules are not applicable in the culling situation, which is not hunting. Instead, Park Service regulations that permit the Park Service and its agents to conduct activities necessary to counteract threats to park resources govern. For example, 36 C.F.R. § 1.2 specifically states that:
(d) The regulations contained in parts 2 through 5, part 7, and part 13 of this section shall not be construed to prohibit administrative activities conducted by the National Park Service, or its agents, in accordance with approved general management and resource management plans, or in emergency operations involving threats to life, property, or park resources.

Response: Please see the responses to AL2510 and AL4200 with regards to the use of skilled volunteers in augmenting National Park Service personnel for the purpose of elk management actions.

Volunteers participating in any aspect of elk management at Wind Cave National Park would not be compensated, which includes being allowed to keep any part of animals. If an alternative is selected that includes meat donation, all activities would be carried out in accordance with applicable Federal regulations. While volunteers cannot receive meat directly from the NPS, they would not be excluded from participating in separate donation programs established by state or non-profit organizations. Any meat donation program would be developed in further detail when implementing the plan/EIS.

With respect to the allowance for keeping a small portion of meat harvested by skilled volunteers, this is not being contemplated as part of the Elk and Vegetation Management Plan at Rocky Mountain National Park. Page 9 of the Record of Decision states that “Authorized agents who participate in culling activities would not be excluded from receiving meat through this program.” Rocky Mountain National Park’s website clearly articulates this issue: “Volunteers will be eligible to participate in the acquisition of meat through a separate meat donation program. Volunteers may not acquire any meat directly related to their culling activities or activities of their team members” (Fact Sheet, October 2008). The Volunteer Application also requires applicants to initial a statement that explicitly states: “I understand I will NOT be a direct recipient of meat from the animal culled on the day of my participation as a volunteer; however, I can participate in any meat

recipient program implemented as part of the Elk and Vegetation Management Plan.

AL8100 - Alternatives General: Support elk management--equal emphasis on male and female elk

CONCERN STATEMENT: Commenters stated that any management option should reduce cows as much as bulls, including hunting outside the park.

Representative Quote(s):

Corr. ID: 9 **Organization:** South Dakota Stockgrowers Association

Comment ID: 87089 **Organization Type:** Non-Governmental

Representative Quote: ...females as well as males need to be hunted. Without managing the females, there will be no management or limiting of elk numbers.

Response: Although the current bull:cow ratio for elk wintering in the park is unknown, it is estimated to be 55:100, higher than the ratio in the Black Hills outside the park where the average is 45:100. The EIS (see page 148 of the plan/EIS) indicates that implementing Alternative B may result in an even greater disparity between the two ratios, as bulls are less likely to migrate out of the park during the spring than cows and calves and "be available" for hunting. Alternative B would potentially use selective sharpshooting or hazing of bulls to reduce this ratio so that it is more in line with the 45–55:100 range. Age ratios are also a potential concern, as it appears that a disproportionate number of elk migrating to lands outside the park in the spring are of reproductive age. Although this would help in lowering the rate of increase for the herd, it may also have an adverse effect on the natural age structure of the population. Hunting tags issued by the SDGFP during initial reduction and maintenance periods would be informed by monitoring data collected on the herd to balance the needs to reduce the herd, lower its rate of increase and keep age and sex ratios near those considered healthy. An estimate of the number of cows and bulls removed in each of the years required for initial reduction is available in table 1 of the plan/EIS (page 32).

AL8200 - Alternatives General: Cost of elk management

CONCERN STATEMENT: Commenters stated that the costs for each alternative need to be included in the plan/EIS, especially for fencing and maintenance.

Representative Quote(s):

Corr. ID: 21 **Organization:** *Not Specified*

Comment ID: 87188 **Organization Type:** Unaffiliated Individual

Representative Quote: Why is there no budget associated with each alternative in the EIS? What is the estimated cost for fence and budget for future maintenance?

Response: Appendix D, page 353 in this plan/EIS provides a list of the cost estimates for alternatives B (which includes fencing and gate materials), C, and D. Fencing materials and gates along with construction costs are estimated at $162,000–$182,000.

AL9100 - Alternatives Considered but Dismissed: Hunting in the Park

CONCERN STATEMENT: Commenters stated that hunting inside the park would be the most practical and least expensive way to control the elk population.

Representative Quote(s):

Corr. ID: 6 **Organization:** *Not Specified*

Comment ID: 87107 **Organization Type:** Unaffiliated Individual
Representative Quote: I strongly urge you to consider allowing hunting inside of Wind Cave's boundaries. I specifically request that you consider the use of archery hunting in the park. Hunting would also be a great fundraiser for the park. In an effort to reduce the herd by 200 animals you could easily issue archery licenses to 400 hunters at $500 per license for bull elk and $250 for cow elk. Assuming 150 bulls and 250 cow licenses you would stand to add an additional $137,000 to the park budget while properly managing the elk herd.

Corr. ID: 14 **Organization:** Yankton Sioux Tribe Fish & Wildlife
Comment ID: 87100 **Organization Type:** Tribal Government
Representative Quote: He asked if Tribal members could hunt in the park...

Corr. ID: 20 **Organization:** *Not Specified*
Comment ID: 87196 **Organization Type:** Unaffiliated Individual
Representative Quote: Hunting is the most practical, least expensive & MOST common sense-way to control that elk population. You could pay for your problem with the fees from the hunters involved NOT the taxpayers.

Response: Hunting inside Wind Cave National Park was considered as a preliminary alternative to accomplish direct reduction of the elk population, however, it was not carried forward for further analysis because it is inconsistent with existing laws, policies, regulations, and case law regarding public hunts in units of the National Park System. Throughout the years, NPS has consistently maintained a strict policy of not allowing hunting in national parks. In 1984, after careful consideration of Congressional intent with respect to hunting in national parks, NPS promulgated a rule (36 CFR 2.2) that allows public hunting in national park areas only where "specifically mandated by Federal statutory law." Hunting is not authorized in Wind Cave National Park.

CONCERN STATEMENT: Commenters suggested that because hunting is currently against the park's legislation, NPS should pursue a change in legislation to allow for such activities.

Representative Quote(s):

Corr. ID: 21 **Organization:** *Not Specified*

Comment ID: 87190 **Organization Type:** Unaffiliated Individual
Representative Quote: The Black Hills Sportsmen's Club is concerned about the options to manage elk in Wind Cave National Park (WCNP), South Dakota. We would like you to please consider drafting and carrying through legislation that would change original enabling legislation to allow the potential option to reduce elk and other wildlife through regulated and controlled hunting…Wind Cave National Park will not consider hunting as one of the tools to reduce overpopulated elk and has eliminated it from further consideration in alternatives for control.

Corr. ID: 21 **Organization:** *Not Specified*
Comment ID: 87193 **Organization Type:** Unaffiliated Individual

Representative Quote: Our Club's major concern is that when a draft EIS is available for public review, it will very likely not include an alternative to use regulated hunting as a viable method for elk population control. We feel this is short sighted and that Congress can decide if and when regulated hunting could be a logical, reasonable and financially feasible tool . . .Thus it may be time to look at the entire legislation on why this park was set up and redirect the management in a direction that provides some balance.

Corr. ID: 22 **Organization:** *Not Specified*
Comment ID: 87182 **Organization Type:** Unaffiliated Individual
Representative Quote: Why are we spending millions of tax dollars to study and fund this ridiculous plan when hunting is the simplest remedy? Not only will hunting reduce the size of the herd, but generate revenue for the NPS at the same time. Change the legislation, don't waste hard earned tax dollars.

Response: Wind Cave National Park's enabling legislation does not specifically address hunting, therefore it has never been considered a legal activity, per 36 CFR 2.2 (see response above). Congressional action would be required to change existing legislation to allow hunting in the park. Due to the longstanding policy against hunting in national parks except where specifically authorized, the NPS directorate has not been in favor of supporting a change to Wind Cave's legislation that would allow for hunting. Therefore, Wind Cave National Park is not seeking a change to its legislation.

AL9200 - Alternatives Considered but Dismissed: Trapping/roundup/translocation of elk to areas outside the Park

CONCERN STATEMENT: Commenters questioned whether elk could be translocated to areas outside of the park.

Representative Quote(s):

Corr. ID: 14 **Organization:** Yankton Sioux Tribe Fish & Wildlife
Comment ID: 87099 **Organization Type:** Tribal Government
Representative Quote: Robert asked if we could move elk to the Yankton Sioux Res., as they would like elk.

Response: Prior to 1994, the park managed elk populations through the use of roundup and translocation activities conducted every few years. This approach worked well until 1997 when CWD was identified in a captive herd adjacent to the park (page 9), at which point the park ceased translocation of elk. In July 2002, the NPS director issued a memo stating "deer or elk will not be translocated from areas where CWD is known to occur" (see appendix B of the plan/EIS). In the same year, CWD was documented in a cow elk in the park. The prohibition on the translocation of elk to other locations outside park boundaries is still in effect. With the option of elk translocation precluded as a management too, the park was left with no options for population management, prompting the initiation of this plan/EIS.

AL9300 - Alternatives Considered but Dismissed: Reintroduction of elk predators to Park

CONCERN STATEMENT: Commenters stated that the plan/EIS needs to include more information with regards to the dismissal of an alternative involving the reintroduction of wolves.

Representative Quote(s):

Corr. ID: 29 **Organization:** Safari Club International

Comment ID: 87030 **Organization Type:** Non-Governmental
Representative Quote: The Park Service properly "Considered but Dismissed" the predator (Wolf) reintroduction alternative and should fully document all reasons for doing so.... the Park Service should ensure that it reflects all points discussed and considered in reaching the conclusion. For example, the Draft Elk Plan says that the "reintroduction of wolves to accomplish population goals was discussed in detail .... " Page 52. SCI and SCIF understand that the Park Service had extensive informal discussions with the SDDFGP over this option. Yet the only reflections of the state's involvement in considering but dismissing this option appear to be a mention of the state on page 52 and the state's letter found in Appendix H (located at page 381). Although SCI and SCIF do not know the extent of discussions with the U.S. Fish and Wildlife Service, the Draft Elk Plan also should reflect those discussions.

Corr. ID: 29 **Organization:** Safari Club International
Comment ID: 87049 **Organization Type:** Non-Governmental
Representative Quote: SCI and SCIF are currently involved in litigation in U.S. District Court in Colorado over the Rocky Mountain National Park Elk Management Plan. In this case, wolf advocates have sued the Park Service for failing to consider the introduction of fertile wolves as an alternative for elk population management. Plaintiff in that litigation argues that the consideration and dismissal of such a strategy did not fulfill the Park Service's NEPA obligations. In light of this litigation, and the possibility that the Park Service's decision not to further consider the wolf reintroduction alternative will be challenged in court, the Park Service should ensure that the record fully reflects the depth of its consideration of this alternative and the reasonableness of its decision to dismiss this alternative from further consideration.

Response:

We believe the reasoning as laid out on page 51 of the plan/EIS adequately summarizes the issues with reintroducing wolves. However, additional detail from discussions with the USFWS (E. Bangs 3/14/06; S. Larsen 5/18/06) is included in this response as requested. The USFWS Wolf Recovery Coordinator, Ed Bangs, indicated several problems with reintroducing wolves to the park:

1. The amount of space in Wind Cave (44 square miles) is much too small for an average wolf pack, which uses between 200 and 500 square miles of territory.

2. If the park introduced a small fertile pack, and the alpha female or male died, no breeding would take place as breeders come from adjacent packs. Packs studied in Europe indicate that those without contiguous packs become “sick” with adverse effects on breeding, feeding and social behavior.

3. Any pups that are born to the pack would attempt to leave seeking mates from other packs. This means they would be using all means to try to exit the park, even if they were shocked from electric collars. They would also never attempt to return if shocked on their way out of the park.

4. The collars would also be problematic according to Bangs, as the batteries would be unreliable and it would be very difficult to design a fence system where the current was not broken by animals shoving against the fence, chewing on wires, trying to escape, etc. The thickness of wolf fur would change seasonally, and contact with the skin would be less likely in the winter. Without this contact, wolves would be more likely to escape; in addition, park staff would need to handle wolves and wolf pups frequently to ensure contact (3–4 times per year to change batteries, ensure prongs are the correct length, etc.- Dan Foster, personal comm. 12/17/08.).

5. It is possible that wolves would affect elk distribution so that most would leave the park and not return; this in turn would mean the wolves would predate non-target species such as deer or antelope.

6. As noted in the plan/EIS (appendix G), the USFWS would not be willing to either grant permission to "take" fertile wolves from another U.S. population to seed a non-fertile pack at Wind Cave and would be unwilling to expend financial and staff resources to grant "10(j)" status (e.g. designate an otherwise listed species as a non-essential, experimental population, allowing more flexibility in its management) unless the Wind Cave pack was contributing to reintroduction efforts (e.g., was fertile and allowed to exit the park naturally). The USFWS also is only willing to consider a 10(j) status when there is state support. Fertile wolves exiting the park either because they are allowed to do so to meet recovery efforts, or simply because the fence cannot hold them (experts unanimously agreed it would be extremely difficult for any fence to keep all wolves penned in and cited holding pens in Yellowstone prior to wolf release where wolves escaped as an example) is absolutely untenable for the South Dakota Game Fish and Parks, as noted in the letter included as appendix H of the plan/EIS. Gray wolves remain a listed species in western South Dakota, and without special status conferred by 10(j), could not be shot or harassed in any way should they leave the park, leaving the state or landowners with no management options.

E1000 - Elk: Ungulate Disease

CONCERN STATEMENT: Commenters stated that releasing elk onto private property will expose livestock herds to CWD and other wildlife diseases.

Representative Quote(s):

Corr. ID: 9 **Organization:** South Dakota Stockgrowers Association
Comment ID: 87082 **Organization Type:** Non-Governmental
Representative Quote: In addition, releasing elk onto private property will expose livestock herds in the area to the CWD that is known to infect the elk herd in Wind Cave. Park managers should be working to eradicate CWD, a sister disease to BSE (mad cow disease) rather than potentially spreading the disease by releasing elk onto private land or federal land.

Corr. ID: 16 **Organization:** *Not Specified*
Comment ID: 87225 **Organization Type:** Unaffiliated Individual
Representative Quote: The reason you are overstocked is because of your Diavase Problems & nobody wants your animals especially the Rancher. I have had first hand experience with Lepto and Vibro problems in my cattle from Elk you

turned out in the past. I do not want a repeat of this problem, plus the cost of the Testing. You also have other diseases in your animals that I'm familiar with & don't want. You will have an ongoing problem until you gather, Test, Vaccinate, & eliminate those that need culled. Its time to start a Disease Mgt program in the Park. don't spread your diseased & sick animals all over Private & Public land. This is not management but an attitude of out of sight, out of mind, & let the Rancher deal with them. . .I have lived here & ranched for over 50 years & in that time I've seen a beautiful, well managed Park turn into a Prairie Dog Haven, source for Lepto, Vibro & other diseases & the attitude towards the Rancher is we don't car what impact our migrating Prairie dogs or Diseased animals have on you.

Response: Although CWD is part of the same family of transmissible spongiform encephalopathies as is BSE, it is not the same disease and is not transmissible to cattle (see pages 89–90 of this plan/EIS for more information). Brucellosis is a disease that has been eradicated from the park's bison herd, yet the park continues to test all bison scheduled for translocation during its roundups every few years. Because bison are significantly more susceptible to brucellosis than elk, park managers are confident the disease would have shown up in the park bison herd if it were in elk herds in the vicinity. The park has tested more than 3,900 bison since 1986 for brucellosis and none have been positive for brucellosis, indicating this disease is eradicated from the park. This is supported by the South Dakota State Veterinarian, who indicated in a recent press release that "Surveillance done over the years indicate that there is no evidence of brucellosis or tuberculosis in free ranging elk in the Black Hills including Wind Cave" (Wind Cave National Park press release issued September 18, 2008).

In terms of any other disease being transmitted from elk to other wildlife or to cattle or domestic animals, the elk that winter in the park have always been able to migrate from the park and do so regularly. There is no evidence that the segment of the Black Hills population wintering in the park has diseases or disease prevalence beyond those of any other segment. In fact, the park maintains a program of shooting any elk or deer that has obvious signs of CWD, which is likely to lower the prevalence of this disease for animals wintering in Wind Cave National Park compared to those outside the park.

CONCERN STATEMENT: Commenter stated that the document downplayed the severity of and risks associated with CWD.

Representative Quote(s):

Corr. ID: 18 **Organization:** n/a

Comment ID: 87217 **Organization Type:** Unaffiliated Individual
Representative Quote: The information written about CWD is designed to make people not care about the seriousness of this disease. It is clear this is a serious disease. I think the hunting community does not want to admit just how serious it is.

Response: NPS recognizes the seriousness of CWD and is committed to doing all that it can to monitor the disease and remove diseased animals from the population. This plan/EIS describes CWD in chapter 3 with regard to the elk population and includes extensive public health guidance in appendix E with regard to the

donation of carcasses for human consumption. In light of the public health guidance, Wind Cave National Park has limited meat donation as an option only under circumstances where cross-contamination of carcasses does not occur.

CONCERN STATEMENT: Commenters questioned whether the elk in Wind Cave National Park have been tested for brucellosis and state that a vaccination program needs to be put into place to prevent the disease.

Representative Quote(s):

Corr. ID: 26 **Organization:** *Not Specified*

Comment ID: 87109 **Organization Type:** Unaffiliated Individual
Representative Quote: The environmental impact statement did not indicate that elk were tested for Brucellosis as part of the Draft Elk Management Plan. Page 98 states the bison were "free of the disease brucellosis." Yellowstone is presently addressing Brucellosis in their bison and elk and the disastrous financial effect it is having on production livestock agriculture. There needs to be an addendum to include testing for Brucellosis in the elk in WCNP. ...The elk need to be tested and some type of proactive vaccination program in place to prevent the disease.

Response: The park disagrees. If brucellosis was still in the environment, the park feels strongly that it would be found in our bison herd during our routine testing program at our roundups. The entire state of South Dakota has been declared brucellosis free, yet the park continues to test more susceptible bison for the disease, with no positive results.

CONCERN STATEMENT: Commenters stated that hazing animals into areas outside of the park would exacerbate disease spread and contamination of land outside the park, and that effective population management of both deer and elk is necessary to reduce the extremely high prevalence of CWD in the park.

Representative Quote(s):

Corr. ID: 33 **Organization:** South Dakota Animal Industry Board

Comment ID: 87022 **Organization Type:** State Government
Representative Quote: Effective population management of elk must be combined with effective management of deer to reduce the prevalence of CWD and the risks of other diseases becoming established in the population.

Corr. ID: 33 **Organization:** South Dakota Animal Industry Board

Comment ID: 87020 **Organization Type:** State Government
Representative Quote: My comments were to the effect that WCNP is home to an extremely high incidence of CWD per acre. Further comments were that I'd recommend the park immediately repair all fences, especially the border with Custer State Park to preclude further spread of this disease to other cervidae in the State, especially to elk and deer within Custer State Park.

Corr. ID: 33 **Organization:** South Dakota Animal Industry Board

Comment ID: 87023 **Organization Type:** State Government
Representative Quote: Therefore the SDAIB strongly recommends that WCNP

effectively repair fences, properly confining the animals that are on the property of the park, and then drastically reduce the CWD susceptible animal population within the park... WCNP through a quarantine and quarantine release period demonstrated in the 1980's that its animals can be effectively managed, tested, and harvested to reduce and eliminate diease.

Response: Unfortunately CWD has become widespread and will continue to be an issue as long as there are deer and elk in the Black Hills. The spread of CWD is a concern to the park and the National Park Service but it is impractical and impossible to remove every cervid from the environment to keep the disease from spreading. The park resorts to on-the-ground surveillance of the elk herds to identify animals exhibiting clinical signs of CWD. Under a National Environmental Policy Act (NEPA) categorical exclusion, the park can remove animals that exhibit clinical signs of CWD without additional environmental assessment. As of September 2006, 181 deer and elk (45 elk, 109 mule deer and 27 white-tailed deer) had been killed and/or tested, with eleven elk and eight deer testing positive for CWD. It is important to note that this targeted testing done by the park cannot be used to determine prevalence rate, as it is not systematic or random but rather deliberately picks out sick animals. No systematic study of elk has been conducted at Wind Cave National Park to determine statistically valid prevalence rates because this would involve killing a large percentage of the population to obtain test results.

Many of the same elk that reside in the park at certain times of the year are the same elk that move in and out of the park. This movement/exchange of elk has been going on for decades. These elk are free ranging animals. They are part of a larger population that move throughout the southern Black Hills. The park is not interested in creating a captive herd or a closed herd situation where movement in and out of the park is stopped. CWD has been documented throughout the Black Hills, not just within Wind Cave National Park. Even though the boundary fence with Custer State Park is constantly maintained, CWD has also been found within its boundaries. This 7-foot fence deters elk or deer from moving into or out of Wind Cave National Park but it is not prohibitive to wildlife that want to move between the two parks.

HS1000 - Human Health and Safety: Human consumption/use of elk carcasses

CONCERN STATEMENT: Commenters were concerned about the potential for effects related to the safety of animals harvested outside of the park if sterilization or fertility control were to be used as a management action, the use of lead shot in elk killed by hunters, and whether brucellosis is an issue.

Representative Quote(s):

Corr. ID: 18 **Organization:** n/a

Comment ID: 87206 **Organization Type:** Unaffiliated Individual
Representative Quote: Feeding elk meat to poor people when it has lead shot in it is highly dangerous for those people - you are not doing them a favor.

Corr. ID: 27 **Organization:** *Not Specified*
Comment ID: 87169 **Organization Type:** Unaffiliated Individual
Representative Quote: What assurances do we have, that WCNP wildlife are Buccioulus free? The health of the food supply must be protected

Response: Impacts to human health from sterilization or fertility control would be avoided by leaving enough time between treatment and the "withdrawal" period (the amount of time needed for the drug to fall to such low levels that it would not affect humans) for human consumption to ensure hunted elk are not a hazard. For example, antibiotics and anti-inflammatory drugs administered to elk following surgical sterilization require a 30–45 day withdrawal period during which human consumption is prohibited. This means surgical sterilization would be stopped at least 45 days before hunting season begins. Fertility control agents may present greater challenges, but ideally an agent would be safe enough to require no withdrawal period (see page 45 of the plan/EIS). If the agent used to treat elk does require a period before human consumption is safe, it would either be administered so that the withdrawal period is complete before hunting begins, or the elk would be permanently marked with information about risks and withdrawal periods. Adverse impacts to human health for those that abide by this information would be negligible, with potential moderate impacts (including possible sterility) for those that do not heed the warnings.

Brucellosis has presumably been eradicated from the Wind Cave National Park bison herd (see E1000 above). The quarantine was lifted in December 1986. Since bison are more susceptible to brucellosis than elk, its absence in the bison population indicates its absence in the entire population of susceptible wildlife.

The human consumption of elk meat containing lead shot (bullets) applies only to alternative B (hunting outside the park). Under this alternative, no donation of meat would occur. Donation of elk meat would occur in alternative C (roundup and live shipment or euthanasia) but elk would not be killed by shooting, so lead shot would not be a concern. Under alternative B, elk harvested outside the park would most likely be consumed by individual hunters and their families. The NPS has no authority over whether hunters use lead bullets for harvesting activities outside park boundaries and it is considered likely that such ammunition would be used by a number of hunters.

Recent research provided by the New York Department of Environmental Conservation (NYDEC) indicates that small lead fragments are often present in hunter-harvested game, particularly ground game meat (http://www.dec.ny.gov/outdoor/48420.html). Lead poisoning is considered extremely dangerous, with pregnant women and young children being at greatest risk. Some agencies recognize that the impacts of ingested lead fragments are not well understood and encourage additional research (http://www.dnr.state.mn.us/hunting/lead/index.html). Several federal and state agencies are currently planning or conducting such research to determine potential impacts of ingesting lead fragments.

Tips for hunters to avoid lead ingestion are provided by several agencies, including the NYDEC, and include actions such as trimming around the wound channel, discarding meat with excessive shot damage, and not consuming internal organs which may contain lead fragments (http://www.dec.ny.gov/outdoor/48420.html).

HS4000 - Human Health and Safety: Impacts of proposal and alternatives

CONCERN STATEMENT: Commenters questioned whether the incineration of elk carcasses could have an adverse impact on human health.

Representative Quote(s):

Corr. ID: 18 **Organization:** n/a

Comment ID: 87212 **Organization Type:** Unaffiliated Individual
Representative Quote: BURNING OF BRUSH POLLUTES THE AIR CAUSING FINE PARTICULATE MATTER TO DRIFT EAST, CAUSING LUNG CANCER, HEART ATTACKS, STROKES, ASTHMA, ALLERGIES AND PNEUMONIA.

Response: The impacts of incinerator emissions to human health is discussed in this plan/EIS in the air quality section (see pages 232–233 of the plan/EIS). To summarize, very little smoke is emitted from the air-curtain incinerator and those experienced with operating them also note very few odors. This is because this particular technology involves the movement of air quickly through the area where burning occurs, resulting in a quick and efficient incineration of the carcass. The primary health concern is from hazardous air pollutants, which include compounds such as chloroform, naphthalene, ethyl benzene and other organics. This plan/EIS indicates that emissions of these substances from a similar incinerator used for livestock carcass disposal would pose an "excess lifetime cancer risk" or ECLR from any one substance of less than 1 in 1,000,000 and an ELCR of 1 in 100,000 for all hazardous compounds from the incineration combined. The release of hazardous compounds from the incinerator in any alternative proposed in this plan/EIS (alternative D, or alternative C if no partner is found) would be 150 times less than the emissions for the livestock carcass removal project (e.g., less than 1 in 100,000,000 for any one substance and less than 1 in 1,000,000 for all hazardous emissions) and considered a negligible impact to human health.

MT1000 - Miscellaneous Topics: Accuracy of data used for plan development

CONCERN STATEMENT: Commenters stated that the references in the bibliography and the elk population data used in the plan are too old and should be updated.

Representative Quote(s):

Corr. ID: 18 **Organization:** n/a

Comment ID: 87221 **Organization Type:** Unaffiliated Individual
Representative Quote: The bibliography is ancient, and hardly suitable for using as a basis for plans 20 years in the future.

Corr. ID: 18 **Organization:** n/a
Comment ID: 87211 **Organization Type:** Unaffiliated Individual
Representative Quote: QUOTING WHAT ANIMAL POPULATIONS WERE IN 2000 IS SERIOUSLY OUTDATED.

Response: The references used to describe resources that may be affected and to analyze impacts are the best available. We disagree that the bibliography is outdated. On the contrary, the reference list shows the depth of research that has been undertaken to gather as much information as possible; many references cited also

come from research and/or information dated 2005 and later. A few early landmark studies of elk behavior specifically at Wind Cave were used to describe population history; however, this history was updated and supplemented by more recent information produced in the last two years (see NPS 2006g and Sargeant et al. 2008 for example). Elk population counts used in the document are from 2007, the latest available when the analysis was conducted (see table 7).

CONCERN STATEMENT: One commenter stated that the comparison of sharpshooters and hunters on pages 50–51 of the draft plan/EIS is inaccurate and should be deleted.

Representative Quote(s):

Corr. ID: 29 **Organization:** Safari Club International

Comment ID: 87054 **Organization Type:** Non-Governmental
Representative Quote: The discussion on pages 50-51 that professional sharpshooters are more efficient and effective than hunters (i.e., non-sharpshooters in a sport hunting situation) is not well supported and is not necessary to support the decision to dismiss without further consideration the alternative of authorizing a sport hunt within WCNP. The single study in support of the statement that "Sharpshooters are found to be more efficient than hunters in meeting ungulate reduction goals" is insufficient to support such a broad statement about the relative efficiency of the two methods. In addition, the Park Service does not address the cost issue, which would obviously be relevant to a detailed analysis of this issue. But here, as the Park Service prohibits hunting in WCNP, the Park Service's statements about the efficiencies of the sharpshooting and sport hunting options are unnecessary. For all these reasons, SCI and SCIF recommend that the Park Service remove references to the alleged efficiencies of professional sharpshooting, or at least note that there are uncertainties and debate about this issue. ...the Park Service should make clear that it is not passing judgment on the relative efficiencies of using paid professional sharpshooters versus skilled volunteer sharpshooters in a non-hunting situation.

Response: The sentences “Sharpshooters are found to be more efficient than hunters in meeting ungulate reduction goals (0.55 deer per hour for sharpshooting over bait versus a hunter success rate of 0.03 deer per hour for a white-tailed deer study in Minnesota. This is at least in part because sharpshooters are encouraged to kill several animals while hunters are only allowed to shoot up to their tag limit” have been removed from the document. The issue of whether sharpshooters or hunters are more efficient is not the central reason why hunting is not considered a feasible alternative; in addition, these statistics are for white-tailed deer hunting and not for elk, where similar comparisons are not available.

CONCERN STATEMENT: One commenter noted that the discussion of wolves in Yellowstone and their effects on elk is unclear and should be clarified in the draft plan/EIS.

Representative Quote(s):

Corr. ID: 29 **Organization:** Safari Club International

Comment ID: 87053 **Organization Type:** Non-Governmental
Representative Quote: The discussion of wolf reintroduction in the Yellowstone basin on page 138 needs to be clarified. The Draft Elk Plan states: "This has been further substantiated 10 years into the reintroduction effort by 15 North American

wolf experts recently predicting that even 100 wolves inside the park would result in no more than a 20% reduction in elk (NPS website, Dec 2007)." This suggests that around 2005 (10 years into reintroduction of wolves in Yellowstone), the 15 experts made the prediction discussed. The Park Service website says "Instead, 15 North American wolf experts predicted that 100 wolves in Yellowstone would reduce the elk by less than 20%, ten years after reintroduction." Although this statement about Yellowstone is ambiguous, SCI and SCIF read it to mean that the 15 experts predicted-before reintroduction started-that ten years into reintroduction, wolves would have the stated impact. A prediction made before reintroduction is different than a prediction made ten years into the reintroduction, when presumably the experts would have information about the actual impact of the reintroduced wolves on elk. The Park Service should confirm the meaning of the Park Service Yellowstone website and clarify its statement on page 138 of the Draft Elk Plan.

Response: The Yellowstone website indicates the 15 experts made their prediction 10 years after reintroduction (that is, in 2005).

MT2000 - Miscellaneous Topics: Public input/comment

CONCERN STATEMENT: One commenter stated that if at some time in the future, NPS is considering implementing fertility control to manage the elk population, the public must be given a chance to comment more fully on all aspects of the methods intended for use.

Representative Quote(s):

Corr. ID: 29 **Organization:** Safari Club International

Comment ID: 87029 **Organization Type:** Non-Governmental
Representative Quote: The Park Service can consider Alternatives E and F now but should not implement them without further public involvement.... further public notice and comment must precede any consideration of actually putting such methods into effect.

Corr. ID: 29 **Organization:** Safari Club International
Comment ID: 87044 **Organization Type:** Non-Governmental
Representative Quote: If at some time in the future the Park Service believes that these problems are resolved and conditions are or might be met, it must give the public an opportunity to comment on both whether the conditions are indeed met and, if they are, whether employing either or both of these alternatives (sterilization or fertility control agents--clarification added) makes sense in light of the facts at that time. For example, the Park Service currently projects a cost of sterilization at $10,000 per female elk, an astoundingly high figure. Draft Elk Plan at 43. If this alternative warrants future consideration, the projected cost at that time (whether higher or lower) would be an important factor on which public could comment. The public cannot offer fully informed comments now on the actual selection of these alternatives as methods to achieve the goals of the plan.

Response: The plan/EIS includes all the criteria the NPS would require any form of contraception meet before it is applied. These criteria are found on pages 44–45 of the plan/EIS and are assumed to be part of the alternative for impact analysis purposes. Because the NPS has agreed to meet these criteria and the impacts of the

alternative are fully disclosed in the plan/EIS, the park does not anticipate any further public involvement should a contraceptive meeting the criteria become available and be selected for use. Because alternative B (hunting outside the park) is the preferred alternative, the Record of Decision would need to be revised should the park decide to implement alternative F (fertility control) as a maintenance option. This does not require any public review, although notice of a revision would be published in the *Federal Register*.

SE4000 - Socioeconomics: Impacts of proposal and alternatives--hunting outside Park (alternative B)

CONCERN STATEMENT: One commenter questioned whether the revenues to the SDGFP as a result of implementing Alternative B as well as increased beneficial socioeconomic impacts were included in the plan/EIS.

Representative Quote(s):

Corr. ID: 29 **Organization:** Safari Club International

Comment ID: 87032 **Organization Type:** Non-Governmental
Representative Quote: SCI and SCIF assume that the State of South Dakota supports these increased opportunities for elk hunting on state and private lands surrounding WCNP. This alternative would increase revenues to the South Dakota Department of Fish, Game and Parks ("SDFGP") through increased tag sales. It would also increase beneficial socio-economic impacts from increased hunting. If these facts are not already reflected in the Draft Elk Plan, the Park Service should make it clear in the final plan.

Response: The SDGFP is a cooperating agency in the development of this plan/EIS and is supportive of the management options analyzed within the document. All hunting activities outside the park (H3 and H4) will be managed by SDGFP. The analysis of socioeconomic impacts under alternative B (hunting outside the park) assume an increase in hunting activity within H3 and H4 over the first five years of plan implementation (initial reduction). This includes an assumption of a potential increase in hunting licenses issued. However, SDGFP has sole discretion regarding the numbers of hunting licenses issued within these units in any year and the agency considers numerous factors in this determination (e.g., historic hunter success, etc.). Collectively, socioeconomic impacts from increased hunting activities in the initial reduction phase of the plan were presented in the draft plan/EIS as beneficial to the area (page 265). During the later maintenance phase, it is assumed that the elk population wintering in the park will have been reduced to around 1990 levels (target range, 232–475).

Regarding increased revenue to the SDGFP related to issuance of additional elk licenses under alternative B, a percentage of such increases would likely be retained by the agency. However, favorable hunter success rates within these hunting units may preclude the need to issue additional tags, resulting in no increase in revenues. Again, decisions regarding the hunting within these hunting units are made solely by the SDGFP and it is difficult to predict potential State revenues prior to plan implementation.

SE4050 - Socioeconomics: Impacts of proposal and alternatives--agriculture/ranching

CONCERN STATEMENT: Commenters stated that the costs associated with elk being redistributed onto lands outside of the park should be included in the socioeconomic analysis, as higher depredation costs and additional loss of cattle feed sources will impact adjacent lands.

Representative Quote(s):

Corr. ID: 9 **Organization:** South Dakota Stockgrowers Association
Comment ID: 87081 **Organization Type:** Non-Governmental
Representative Quote: The Park Service...is responsible for the wildlife within the confines of the park, and should not consider releasing elk onto private property or federal land adjoining private property as a viable management option. Livestock producers in the area...create a business "management plan" for their farms and ranches and this plan does not and should not include providing feed for elk. Feed that the elk consume will obviously displace feed they need for their livestock, and force landowners to either cut livestock numbers or purchase additional feed.

Corr. ID: 26 **Organization:** *Not Specified*
Comment ID: 87111 **Organization Type:** Unaffiliated Individual
Representative Quote: The Actual cost in dollars of lost production to agriculture of takings of the grassland by the WCNP elk was not addressed. Grazing rights are sold as pasture rent for beef cattle. If the elk eat the grass, it is not available to production agriculture to be sold as pasture rent. The cost in lost available grass for cattle also needs to be addressed in the impact statement. There is a significant financial impact on area agriculture. Again an addendum is in order.

Response: The ultimate goal of elk management in the park is to reduce the herd size, which means that impacts to forage on federal lands outside the park and leased for warm season cattle grazing would be positive in the long run. The U.S. Forest Service is a cooperating agency for this project and has raised no objection to any of the alternatives, including alternative B which makes use of fences and gates to keep migrating elk from entering the park during the hunting season. As part of the internal agency team discussions, the idea of improving range conditions through the use of controlled burning was considered and may be proposed by Black Hills National Forest as part of its forest management planning. If not, some short term minor or moderate adverse impacts to those ranchers leasing federal land (similar to those described for private landowners) may occur under alternative B. However, it is equally possible that no additional depredation on these lands over and above what has occurred for decades would occur, as elk have been able to access these lands by exiting the park for many years. Gates are not anticipated to be raised until late in the summer, minimizing the time elk that would otherwise be in the park are on leased grazing land. Because each alternative would result in a smaller elk herd, some long-term socioeconomic benefits for both federal lease holders and private ranchers would occur under any of the alternatives.

VG1000 - Vegetation: Condition

CONCERN STATEMENT: One commenter stated that forage in the entire region is in poor condition and cannot support additional elk.

Representative Quote(s):

Corr. ID: 27 **Organization:** *Not Specified*

Comment ID: 87165 **Organization Type:** Unaffiliated Individual
Representative Quote: WCNP has too many elk for the amount of habitat / grass land available. Therefore they intend to push the elk on the adjoining land. This land also has been in a drought situation for 7years. While the recent rains are encouraging the grassland still needs more recovery time . . . We do not have enough grass for our existing elk let alone additional elk.

Response: The alternatives are each intended to reduce the number of elk. As noted in the EIS, not taking action to reduce the number of elk wintering in the park could mean a large increase in the herd and unsustainable offtake of forage in the park (see pages 185–187 of this plan/EIS). This in turn would affect other park resources, as well as forage on neighboring lands as noted by the commenter. These are identified as the reasons action is needed (see page 5 of the plan/EIS). Long term benefits to grassland in the form of a reduction in loss biomass and prevalence of nonnative invasive species are expected regardless of the action alternative implemented (see pages 192–193, for example). This would be the case for neighboring lands as well as fewer elk would be available to migrate outside the park during the spring and summer months. It is possible that depredation on adjacent lands would increase for the first year or two of implementing alternative B; the socioeconomic impact of this increase is addressed in comment SE 4050 above and on page 265 of the plan/EIS.

WH1000 - Wildlife and Wildlife Habitat: General

CONCERN STATEMENT: Commenters stated that management strategies in the park need to focus on rangeland maintenance to ensure sufficient feed for all wildlife species.

Representative Quote(s):

Corr. ID: 9 **Organization:** South Dakota Stockgrowers Association

Comment ID: 87090 **Organization Type:** Non-Governmental
Representative Quote: Additional management strategies in the future need to focus on rangeland maintenance. The forage within the park needs to be managed in such a way that there is sufficient feed for all of the wildlife species. This will obviously require herd reduction of elk as well as management of prairie dogs and other species in the park.

Response: The development of the Wind Cave National Park elk management planning alternatives began with the formulation of a team of specialists in different relevant fields. This science team was tasked with determining the appropriate size of the elk population and in so doing considered all wildlife species that use the same food and habitat as elk. Bison and prairie dogs were two of these species and both were determined to have higher priority than elk—bison because they are named in the park's enabling legislation as requiring preservation and prairie dogs because they are an important keystone species in the prairie ecosystem. The park chose to

use a forage allocation method to ensure the continued health of these two species, as well as other wildlife dependent on the same vegetative resources used by elk. This methodology is described in detail in the EIS (see pages 23–25 of the plan/EIS). The NPS would monitor the health of forage in park, as well as other factors described in appendix C of this plan/EIS to determine how to manage its grazers, including changes in the annual maintenance of elk or number of bison translocated during annual roundups.

WH4000 - Wildlife and Wildlife Habitat: Impacts of proposal and alternatives

CONCERN STATEMENT: One commenter stated that the mortality rate and impacts associated with contraception from handling elk would be greater than what was included in the draft plan/EIS.

Representative Quote(s):

Corr. ID: 29 **Organization:** Safari Club International

Comment ID: 87042 **Organization Type:** Non-Governmental

Representative Quote: The stated incidental mortality rates for fertility treatment dramatically under-represent the actual mortality rates for this group of animals. With the risk of death being equal for each treatment, handling animals annually or multiple times per year soon results in "treatment" becoming the most likely cause of mortality for each individual.

Response: To be considered feasible for the park's use as an elk management option, fertility control agents would need to meet several stated criteria (pages 44–45). These include the use of a drug(s) which is effective with a single treatment for a specific duration. This single dose treatment is important due to the high percentage of animals requiring treatment (in the 90% range) to maintain population levels, and to minimize multiple handlings of individual animals. The mobile elk population utilizing park lands increases the difficulty of capturing and later recapturing the same animals and, from a population dynamics perspective, becomes increasingly less effective. Collectively, these factors make the single-treatment criterion important for successful elk management.

Roundups for administration of fertility control agents would be similar to those which have occurred in the past for elk translocation actions (i.e., helicopters, use of existing corrals, etc.). Over the past 32 years, elk mortality rates for nine of the 12 roundups that were conducted for translocation purposes averaged approximately 2–3%. Mortality rates are not available for the remaining three roundups conducted during this period (Weber, pers. comm. 2009). Where possible, and depending on drug requirements, treatment would occur during the winter months to minimize the potential for overheating animals during capture, and to treat when the greatest number of elk are within the park (page 44). It is not believed that additional elk mortality would occur as a result of single-treatment fertility drug injection (Powers, pers. comm.2008). The analysis included in this plan/EIS of minor to moderate adverse effects to elk from roundup/handling for the administration of fertility agents is believed to be a reasonable assessment.

WH8000 - Wildlife and Wildlife Habitat: Ecosystem Processes

CONCERN STATEMENT: Commenters stated that beneficial impacts would be experienced by other wildlife due to leaving elk carcasses in the field under alternative D.

Representative Quote(s):

Corr. ID: 29 **Organization:** Safari Club International

Comment ID: 87036 **Organization Type:** Non-Governmental
Representative Quote: Alternative D, to the extent carcasses are left in the field, would provide some benefits to scavengers and to the soils by adding nutrients.

Response: A new section to address this beneficial impact has been added to the wildlife analysis for alternative D. To summarize, predators and scavengers would have increased food resources for a period of time following sharpshooting. The extent of the impact depends on whether sharpshooters complete their initial reduction (estimated at 8 days per year for 3 to 4 years) during a consecutive period or over a several month span in the winter. If it is the former, up to 60 adult carcasses and an unknown number of calf carcasses could be spread over the park. This would likely bring in additional predators and scavengers from the area around the park until the increase in food is consumed, on the order of a few days to a few weeks. If sharpshooters instead culled the population over several months during each of the first 3 to 4 years, the existing predator and scavenger population in the park would be unlikely to change. In either case, temporary benefits from increases in nutrition during what can be severe winter months would occur for predators and scavengers in the park and perhaps on adjacent lands. Maintenance would also provide ongoing benefits for the park predator and scavenger population, but would likely be a low enough number that those outside the park would be largely unaffected.

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9	Nelson, Larry	South Dakota Stockgrowers Association
33	Holland, Sam	South Dakota Animal Industry Board
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29	Shepard, Merle	Safari Club International
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Correspondence ID 1

Name:	Jerry L. Bloomer
Organization:	
Organization Type:	I - Unaffiliated Individual
Address:	2146 Minnekahta Avenue Hot Springs, SD 57747 USA

Correspondence Text

I want to comment on the Elk Management Plan. As a neighbor of the park, I visit frequently, and am aware of the problems of overpopulation of not only Elk, but also Prairie Dogs. I support Alternative D, Sharpshooting, to immediately reduce the excess Elk population. I believe, however, for long term control, Alternative E or F must also be utilized.

In the absence of predators like wolves, we must manage animal populations in the park or suffer environmental degradation.

Correspondence ID 2

Name:	[redacted]
Organization:	
Organization Type:	[redacted]
Address:	[redacted]

Correspondence Text

The best option would be to allow hunting in the wind cave natioal park but I feel the next best option would be to raise all the fences to 7 ft and have gates or lowered areas to allow for elk migration and to not allow them back into wind cave until after the elk season.

Please do not open the elk permits to any out of state individuals but since I have been able to finally receive an out side the park elk tag this year after 20 years since my last opportunity of having an elk tag. I would hope that you would repeal the 10 year wait until an individual could be able to apply again for the southern unit where the elk migrate into. I feel that there would be great interest in this.

Correspondence ID 3

Name: [redacted]
Organization:
Organization Type: [redacted]
Address: [redacted]

Correspondence Text

this is not a feasible solution. you will have rich people sitting outside of the fence looking for the big bulls. it will be a crap shoot. I know the hunters that can afford it will love it. either us a guided in-park hunt, or ship some out. you need to reduce cows as much. thank you.

Correspondence ID 4

Name: [redacted]
Organization:
Organization Type: [redacted]
Address: [redacted]

Correspondence Text

Having reviewed the 4 alternatives suggested in your proposal I find none of them represent a acceptable plan. In each case there will be, at best, no management or at worse a management plan that will cost the taxpayer money. The most effective plan would be to license hunters to harvest the excess population. In comparsion to the plans offered this would generate monies to the taxpayer with very little cost. The failure of the Wind Cave National Park draft to address the most obvious answer to the situation cast serious doubt on the level of understanding and professional competence of those involved in the drafting of yet another example of bureaucrat idiocy.

I find it incredulous that we continue to pay our taxes to support such foolishness.

Correspondence ID 5

Name:	Dan H. Winrow
Organization:	RMEF
Organization Type:	I - Unaffiliated Individual
Address:	25892 471st Ave Sioux Falls, SD 57107 USA

Correspondence Text

I have read the proposal to allow Elk to leave the park to be harvested by hunters in the next year or two. Please don't let that happen East of Wind Cave Park as that is all private land, and the landowners will not allow any hunting or if they do, they will charge you an arm and a leg. Release them on the West side of the park onto public land. Thanks, Dan Winrow

Correspondence ID 6

Name:	Justin J. Broughton
Organization:	
Organization Type:	I - Unaffiliated Individual
Address:	5501 E 6th St #5 Sioux Falls, SD 57110 USA

Correspondence Text

I support Wind Cave's efforts at propoerly managing the elk herd. As a Black Hills elk hunter I have seen first hand the early fall elk migration into Wind Cave as hunting seasons open and close. I strongly feel that elk exclosures and fencing are just a band-aid to a larger problem however. As long as the elk herd in the park cannot be effectively managed it will remain at levels higher than the carrying capacity of the parks habitat. I strongly urge you to consider allowing hunting insode of Wind Cave's boundaries. It would be a highly effective, safe, and precedent setting proposal. Hunting has not been allowed in our National Parks for too long. It has led to managment issues with elk in places like Wind Cave, Rocky Mountain, and also Teddy Roosevelt parks. The original founder of the park system was himself an avid hunter and would support this wise use management of game animals in our parks today. I specifically request that you consider the use os archery hunting in the park. Archery hunting is minimally invasive, highly effective, and easily controlled by only allowing properly safety educated bowhunters to participate. Hunting would also be a great fundraiser for the park. In an effort to reduce the herd by 200 animals you could easily issue archery licenses to 400 hunters at $500 per license for bull elk and $250 for cow elk. Assuming 150 bulls and 250 cow licenses you would stand to add an additional $137,000 to the park budget while properly managing the elk herd. Thank you for allowing me the opportunity to comment on the proposed management plan.

Correspondence ID 7

Author Information

Name: [redacted]
Organization:
Organization Type: [redacted]
Address: [redacted]

Correspondence Text

To Whomever: Asking for Comments--
I would like to comment on the elk management problem pertaining to Custer State Park,the surrounding units, and Wind Cave. Speaking from my experience I drew a Custer State Park license about five years ago, and then in 2007, in the unit south of highway #16 west out to Elk Mountain (H3). I hunted about one week on the first license and nearly two weeks total in 2007 in that southwest unit. I can understand some of the dilemmas you are now facing but these are not problems that occurred overnight,or in just one season. After my 2007 hunt covering nearly every part of that unit--one sighting of a cow/calf for the two week hunt was the bottom line. The fact I did not come home with an elk from either of the seasons still does not disappoint me even without firing a single round and doesn't enter into what the real reason for these observations. What does disappoint me is the inability to even see sufficient game or signs, and conduct a hunt without the use of motorized vehicles.(1)
Again in the 2007 hunt I was almost assured by people knowledgeable in the state GFP in Rapid City that if I would spend dedicated time in that area there would be a slim chance of me not coming away with an elk. These problems, like I mentioned before, have been going on, yet the greed of the licensing departments to continue selling permits when the numbers were just not there to support the hunting season--troubles me.
Some of your possible ideas to rectify these problems have been passed on to me from a person attending the Wind Cave Elk Management information meeting in Custer on 7-24-08.
Whether it be the height of the fence or gates or what other remedy you eventually come up with to get at this migration pattern- I would like to leave you with my recommendation to those responsible for setting the hunting seasons in these areas. For those of us in perhaps the last five years who have applied in good faith that decent numbers were there, spent a considerable amount of time pre-season scouting, and put a good effort in the field we should be given some kind of preference in whatever the reduction plan that evolves,or in the next seasons applications.I am now 73 years of age, still have my health to enjoy the outdoors- I doubt I will ever get the chance to hunt elk in the Black Hills and draw a license under your present system of licensing. I feel many of us have paid a price and at the same time management people have looked the other way.
If I could eventually be given another opportunity for a HUNT and have some kind of chance I could still feel good about my efforts.
Thank you for listening to my suggestions and I don't feel after sitting on this letter and revising it a number of times that I am out of line with my ideas.

[redacted]

(1) Don't read into my comments I'm against ATV's. They are a great aid in many hunts i.e.game retrieval, but we all know how hunters have abused the privilege.

Name: Douglas m. Traub
Organization:
Organization Type: I - Unaffiliated Individual
Address: 5112 Meadowlark Dr
rapid City, SD 57702
USA

Correspondence Text

Thank you for the oportunity to comment on the elk plan for Wind Cave park.

Several points in the proposed options can be strongly endorsed without accepting or rejecting the entire option. These points include:

1. Options that include the destruction of the elk carcasses are a terrible waste of a good source of protein. Hunting outside the park is therefore less wasteful. Hunters would take care of processing and use the meat.
2. Options that attempt to arrange distribution of the elk meat are too expensive (i.e. - Rapid City's $50 per pound venison, in previous reduction hunts) or impractical because of the presence of CWD.
3. Hazing in the park with helicopters, though it sounds to be the peak of frontier excitement, will likely end with a tragic accident and loss of human life. The cost would be exorbitant and senseless.
4. It is a pretty well known secret that "fence adjustments" have been used around parks for years, to help the elk migrate. It makes even better sense to have planned and surpervised fence adjustments to direct the elk (in conjunction with hazing in the park)

There may be a few mechanisms to make some of the options less expensive, more practical, and safer. These include:

1. Suggest or require successful hunters who draw a tag for out of the park hunting to "donate" 1/2 day towards hazing activity in the park. The cost would be in the organizers salaries only, and maybe a few pots of coffee to get the hazers going in the morning. RMEF might even donate a few organizers for the hazing crews in return for publicity, photo ops , etc. Volunteer hazers would be cheaper and safer than helicopters, planted explosives, loud bad rock music or some of the other ideas I have read. Strongly worded disclaimers (statemnts of hold harmless) and physician statements as to acceptable levels of health to physically participate would likely be needed to prevent the activities from attracting plaintif attorneys.

2.The GF and P would likely have the best ideas for how to spread the seasons out of the park over several weeks, but if I could suggest: many short seasons rather than one huge donnybrook. This would be potentially safer and attract fewer PETA members to protest in their fawn elk costumes.

In short, I favor in the park hazing with volunteers on the ground, strategic fence adjustments, and organized hunting out of the park, until acceptable levels of population control are met. Follow-up female elk birth control and monitoring seem reasonable later.

Thanks.

Name:	Larry Nelson
Organization:	South Dakota Stockgrowers Association
Organization Type:	I - Unaffiliated Individual
Address:	426 Saint Joseph St Rapid City, SD 57701 USA

Correspondence Text

South Dakota Stockgrowers Association
426 St. Joseph Street
Rapid City, S.D. 57701

Dan Foster
Chief of Resources
Wind Cave National Park
Comments submitted electronically via: www.parkplanning.nps.gov

August 18, 2008

RE: Wind Cave Elk Management Plan

Mr. Foster,

Background:
The South Dakota Stockgrowers Association (SDSGA) is an organization of 1,700 independent producers committed to representing the industry's needs in regard to animal health, trade, marketing and land use issues.

SDSGA appreciates the opportunity to provide meaningful input regarding the Wind Cave Elk Management Plan.

Comments:
The South Dakota Stockgrowers Association strongly urges the Park Service to not release elk onto private land or neighboring federal land because of overpopulation problems. We oppose Alternative B.

The Park Service, just as any land management agency, is responsible for the wildlife within the confines of the park, and should not consider releasing elk onto private property or federal land adjoining private property as a viable management option. Livestock producers in the area must manage their property in such a way that they can maximize profit using only the resources available to them. They create a business "management plan" for their farms and ranches and this plan does not and should not include providing feed for elk. Feed that the elk consume will obviously displace feed they need for their livestock, and force landowners to either cut livestock numbers or purchase additional feed. In addition, releasing elk onto private property will expose livestock herds in the area to the CWD that is known to infect the elk herd in Wind Cave. Park managers should be working to eradicate CWD, a sister disease to BSE (mad cow disease) rather than potentially spreading the disease by releasing elk onto private land or federal land.

Releasing excess wildlife is not "management" of that wildlife. It is against the law for cattle producers to open gates to release their cattle onto park property, state or federal property or other private property when they run short of feed or water. It should be no different for wildlife in parks or federal lands.

Of the alternatives offered, SDSGA prefers alternative C. We strongly support testing of every single carcass for CWD. The carcasses that are not infected should be donated to a worthwhile cause. All other carcasses should be disposed of so as not to spread CWD to other wildlife or to livestock in the area.

In the future, management should include a hunting season on the elk in the park. However, females as well as males need to be hunted. Without managing the females, there will be no management or limiting of elk numbers.

Additional management strategies in the future need to focus on rangeland maintenance. The forage within the park needs to be managed in such a way that there is sufficient feed for all of the wildlife species. This will obviously require herd reduction of elk as well as management of prairie dogs and other species in the park.

After elk numbers are reduced to a manageable level, SDSGA supports alternative E, sterilization of remaining elk. However, we support sterilization of both males and females.

Thank you,
Larry Nelson
President

DEPARTMENT OF GAME, FISH AND PARKS
Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

August 15, 2008

RECEIVED
AUG 21 2008
Wind Cave National Park

Vidal Davila, Park Superintendent
Wind Cave National Park
26611 US Hwy 385
Hot Springs, SD 57747

Re: Draft Elk Management Plan and Environmental Impact Statement
Post Comments Online at:
http://parkplanning.nps.gov/commentForm.cfm?parkID=170&projectID=10628&documentId=23562

Thank you for the opportunity to comment on this Draft Environmental Impact Statement (DEIS). We appreciated the opportunity to work with you and your staff throughout the development of this document. We look forward to working with you in the future to ensure quality elk management in the Southern Black Hills. Please accept the following comments on the Wind Cave National Park (WCNP) DEIS.

Alternative B – Hunting Outside the Park
Considering all of the alternatives listed in the DEIS, we feel that this alternative makes the most sense and may work in the short-term to accomplish the goals that have been set forth for elk management in WCNP. However, the DEIS document should continue to evolve to develop a fully realistic and long-term approach to elk management within WCNP. We are encouraged that this alternative allows for some opportunity for the sportsmen and women of the State of South Dakota. For this alternative to be effective, it will be important for your staff to maintain the perimeter boundary fence on a frequent basis. It is also critical that you commit to effectively hazing the elk out of WCNP to ensure that the pressure within your boundaries exceeds or equals the hunting pressure outside of WCNP. In order for this effort to work, elk must be made and remain available for hunter harvest outside WCNP boundaries. Without this effort and coordination with the South Dakota Game, Fish, and Parks (SDGFP), effective management of WCNP elk and resident elk outside of the park boundaries will not be possible. We are concerned however that this alternative is not the final solution and may not address all of the herds within WCNP. It will be of utmost importance to continue working with the landowners surrounding WCNP regarding elk management.

Alternative C – Roundup and Live Shipment or Euthanasia
This alternative is acceptable and should be used if Alternative B fails to meet the population objectives. However, we strongly urge that all of the elk that do not test

positive for Chronic Wasting Disease (CWD) be utilized and not go to waste. There are numerous opportunities to utilize the elk such as our sponsored Sportsmen Against Hunger Program as opposed to incinerating healthy elk meat or sending it to the landfill.

Alternative D – Sharpshooting
This alternative should be retained and used as a maintenance tool. And as above, it is not acceptable to incinerate or send non-CWD elk to the landfill. We strongly advise that WCNP make every effort to find ways to properly utilize the elk meat.

Alternative E – Contraception (Sterilization) / Alternative F - Fertility Control Agent
These alternatives should not be considered as a tool to reduce or maintain elk. As the DEIS points out, there is no scientific support to suggest these methods are realistic or a successful way to manage free ranging wildlife populations. These methods are very costly, time consuming, and simply do not work when the ingress and egress of animals cannot be strictly contained. As you are aware the elk move in and out of WCNP and we have concerns as to the ramifications of contraception and fertility controlled elk once they move outside of the park boundaries and are under SDGFP management. We are also concerned regarding the potential impacts on our citizens if these alternatives were implemented and elk were harvested outside of WCNP.

Alternatives Considered but Dismissed
Hunting Inside the Park
Should the preferred alternative not provide sufficient management tools to reduce and maintain adequate elk population levels across WCNP, other actions such as culling by using trained volunteers should be considered and provided as an option. It is our understanding that Rocky Mountain National Park in full cooperation with the Colorado Division of Wildlife is considering such actions. Like the Colorado Division of Wildlife, we would be willing to work you to select and train volunteers to cull elk. As pointed out in previous correspondence on this issue, SDGFP has clearly demonstrated in our neighboring Custer State Park that a willing and able source of citizens exists to accomplish this task in an effective and cost efficient manner. We are willing to work with you to accomplish this task if your proposed plan does not work. We urge that the DEIS include this as a viable alternative or option.

Predator Reintroduction
We reiterate our strong opposition to the release of wolves in WCNP. Wolves released in WCNP will with certainty travel outside of the park boundaries and become our management problem. At the present time, wolves in western South Dakota are a federally protected and listed species thus greatly restricting our management options. We see no realistic scenario (radio telemetry, experimental population status, etc.) such that wolves released in WCNP would not eventually become established as wild, free roaming animals outside the park boundaries and be federally protected. The US Fish

and Wildlife Service has stated that South Dakota is not part of their wolf recovery efforts and is not needed to reach wolf recovery goals. Numerous county commissions and legislative resolutions have made it clear that we are not interested in any part of a wolf reintroduction effort. The release of wolves could have a substantial impact on livestock production and reduce our ability to manage other species of wildlife. Also be aware that by state law, all wild nondomestic animals imported into South Dakota require importation permits and approval from our South Dakota Animal Industry Board. This option is neither realistic nor viable and it should not be included as an alternative.

In closing, we support Alt. B with the added suggestions above. We would like to reserve the right to continue to review and update this document. Please feel free to contact me or my staff for assistance with or to discuss our thoughts on the DEIS.

Thank you again for all your work on this effort to reduce the elk population in WCNP to levels consistent with sound resource management goals. We also greatly appreciate your willingness to include our Department in all phases of this endeavor.

Sincerely,

Jeffrey R. Vonk
Department Secretary

cc: Governor Mike Rounds
SD Congressional Delegation
Bill Even, SD Dept. of Ag.
County Commissions (western South Dakota)

Comments regarding the Draft Elk Management Plan/EIS:

Elk Management Plan

My first concern is the loading of the cattle herds by mingling the diseased Elk with them — Look what has happened in Montana —

My second concern is the forage (hay - Grass) as you know we have been in several years of drought - our pastures are just starting to look like pasture again - We need - NO MORE - Wild Life —

Your Name: Don S. Kirby
Mailing address: Box 116 Buffalo Gap - S.D. 57722
(Optional)
Organization:

RECEIVED
AUG 19 2008
Wind Cave National Park

Correspondence ID 12

Comments regarding the Draft Elk Management Plan/EIS:

After attending the July 21, 2008 meeting in Sioux Falls, South Dakota I came to a conclusion that I support Alternative B - Hunting Outside the Park. Even though it falls short of what I'd like to see, which would be a system modeled after the Custer State Parks Lottery for license system it is the only one that provides the use of sportsmen or women as a management tool to control the elk.

I know that to get a system like we have in Custer State Park would take many years, and it would face much opposition from various out of state groups because it would take national legislation, and ~~they~~ it probably wouldn't pass.

Therefore, the Alternative B option seems like the only option which could be addressed and administered in the shortest period of time, and should be pursued by all interested parties.

Your Name: Charles R Rokusek
Mailing address: 5208 W Emmitt Cir
(Optional) Sioux Falls SD 57106-2192

DUCKS UNLIMITED

RECEIVED
JUL 30 2008
Wind Cave National Park

Organization: 29-90 Sportsmen's Club, member

Correspondence ID 13

Comments regarding the Draft Elk Management Plan/EIS:

I believe Alternative B is the best option for Wind Cave. It isn't the best/preferred option but it is the one that would be easiest for South Dakota to accept.

RECEIVED
AUG 14 2008
Wind Cave National Park

Your Name:
Mailing address:
(Optional)
Organization: self

Ms Janice Nicolay
4041 Heart Lake Rd
Chester SD 57016-7515

Correspondence ID 14

MEMORANDUM OF CALL

Previous editions usable

TO: Dan Foster

X YOU WERE CALLED BY — ☐ YOU WERE VISITED BY —

Robert Angelis

OF (Organization)

Yankton Sioux Tribe Fish & Wildlife

☐ PLEASE PHONE ▶ ☐ FTS ☐ AUTOVON

☐ WILL CALL AGAIN ☐ IS WAITING TO SEE YOU

☐ RETURNED YOUR CALL ☐ WISHES AN APPOINTMENT

MESSAGE

Robert asked if we could move elk to the Yankton Sioux Res., as they would like elk. I told him that we could not translocate elk due to CWD in the population. He asked if Tribal members could hunt in the park and I said hunting was not allowed but they could participate in hunter admin by SD GFP. He was satisfied w/ both responses.

RECEIVED BY: Dan Foster | DATE: 7/31/08 | TIME: 1300

50960-111 NSN 7540-00-634-4018 OPTIONAL FORM 283 (Rev. 1-80) Prescribed by GSA

RECEIVED
JUL 31 2008
Wind Cave National Park

Correspondence ID 15

Comments regarding the Draft Elk Management Plan/EIS:

ALTERNATIVE B - SOUNDS LIKE A GOOD PLAN TO ME, BECAUSE YOU COULD CONTROL THE NUMBERS OF ELK IN WIND CAVE. POSSIBLY THE HUNTERS COULD HARVEST OR HAVE A BETTER CHANCE TO HARVEST AN ELK ON NATIONAL FOREST, BEFORE THE ELK RETURNED TO WIND CAVE, WITH THE HELP OF HAZING ELK. WOULD PROBABLY BE THE BEST.

ALTERNATIVE D - WOULD BE MY SECOND CHOICE, IF YOU COULD FIND A FACILITY THAT COULD HANDLE A LARGE NUMBER OF ELK, AND THE ~~ELKS~~ ELK BE TESTED AND THEN DONATED.

DONATING THE MEAT TO A FOOD BANK ~~ELKS~~ WOULD BE A BETTER ALTERNATIVE.

RECEIVED
AUG 01 2008
Wind Cave National Park

Your Name: MIKE ALEXANDER

Mailing address: PO BOX 122, PRINGLE, S.D. 57773

(Optional)

Organization:

Correspondence ID 16

RECEIVED

JUL 24 2008

Wind Cave National Park

Mr. Davila

I am writing in regards to your EIS for managing Park Elk. We have been in a drought for 8 years & have had to cut our cattle numbers by 50%. 2008 finally brought us some moisture & grass. Now I feel you are overstocked on Elk & want to turn them out on Private & Public land. The reason you are overstocked is because of your Disease Problems & nobody wants your animals especially the Rancher. I have had first hand experience with Tuple and Vibro problems in my cattle from Elk you turned out in the past. I do not want a repeat of this problem, plus the cost of all the Testing. Now also have other diseases in your animals that I'm familiar with & don't want. Now will have an ongoing problem until you either, Test, Vaccinate & eliminate those that need culled. It's time to start as Disease Free Park Program in the Park. Don't spread your diseased & sick animals all over Private & Public land. This is not management but an attitude of out of sight, out of mind, & let the Rancher deal with them.

I have lived here & ranched for over 50 years & the last time the park was beautiful, well managed Park turned into a Prairie Dog Heaven, Source for Tuple, Vibro, & other diseases & the attitude towards the Rancher is we don't care what impact our migrating Prairie Dogs or Diseased animals have on you. Hopefully you will address these problems you have & correct them. Be a decent neighbor for a change

Frank Schroeth
Buffalo Gap, S.D

Correspondence ID 17

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

AUG 18 2008

Ref: 8EPR-N

Vidal Davila, Superintendant
26611 U.S. Highway 385
Hot Springs, SD 57747-9430

RE: Wind Cave National Park, Elk Management Plan Draft Environmental Impact Statement; CEQ #20080237

Dear Mr. Davila,

In accordance with EPA's responsibilities under the National Environmental Policy Act (NEPA) 42 U.S.C. Section 4332(2)(C), and our authorities under Section 309 of the Clean Air Act, 42 U.S.C. Section 7609, the U.S. Environmental Protection Agency Region 8 (EPA) has reviewed the Wind Cave National Park, Elk Management Plan Draft Environmental Impact Statement (DEIS).

The proposed action would identify elk management strategies for Wind Cave National Park in Custer County, South Dakota that will balance natural system functions with native wildlife and vegetation. These strategies are necessary because the elk population in the park is not controlled by natural ecosystem processes. Given the current condition of elk overpopulation in the park, if no action were taken, an increasing elk population would result in increased adverse impacts on park resources, including native vegetation, the habit and health of wildlife, and adjacent land uses.

The DEIS identifies the following alternatives for evaluation:

- Alternative A (No Action) would continue current management actions with no changes made to manage elk populations or their impacts to park resources.
- Alternative B (Hunting Outside the Park) would maximize the use of hunting outside the park on public and private lands to reduce and maintain the population of elk using the park. Alternative B is the park's preferred alternative and its environmentally preferable alternative.
- Alternative C (Roundup and Live Shipment or Euthanasia) would entail movement of elk into an existing corral facility within the park. Following that, elk would be shipped to a slaughterhouse and processing facility, and potentially made available for donation. Alternatively, if the preceding plan cannot be implemented, elk would be killed humanely at the corral site by shooting and/or euthanasia.

- Alternative D (Sharpshooting) would maximize the use of sharpshooters within the park to reduce and maintain elk population.
- Alternative E (Contraception by Sterilization for Maintenance Only) would use permanent sterilization to maintain target elk population following reduction by other methods described in Alternatives B-D.
- Alternative F (Fertility Control Agent for Maintenance Only) would use chemical control fertility agents to maintain target elk population following reduction by other methods described in Alternatives B-D.

EPA concurs that Alternative B, Hunting Outside the Park, appears to be the environmentally preferable alternative. This alternative seeks to balance the objective of reducing and maintaining a more sustainable elk population while minimizing further potential environmental impacts to park resources. Additionally, EPA supports the development of a monitoring and adaptive management plan incorporated into the DEIS action alternatives. This plan allows the park flexibility to modify management actions, if so indicated by monitoring activities, in order to meet the project objectives.

Pursuant to EPA policy and guidance, EPA rates the environmental impact of an action and the adequacy of the NEPA analysis. EPA has rated Wind Cave National Park's preferred Alternative B as Lack of Objections ("LO") under our rating criteria, which is enclosed. The "LO" rating indicates that EPA's review has not identified any potential environmental impacts requiring substantive changes to the proposal.

Thank you for the opportunity to provide comments on the DEIS. If you have questions regarding EPA's comments, please contact me at (303) 312-6004 or Larry Kimmel, EIS project manager, at (303) 312-6659.

Sincerely,

Larry Svoboda
Director, NEPA Program
Office of Ecosystems Protection and Remediation

Enclosure

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements
Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - - Lack of Objections: The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns: The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections: The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory: The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate: EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - - Insufficient Information: The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate: EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From: EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

Correspondence ID 18

Phyllis Cremonini
08/05/2008 10:01 AM CDT

To: Dan Foster/MWCA/NPS@NPS
cc:
Subject: Fw: draft elk management murder plan - killing the elk based on inaccurate info

Dan,

It appears that I am still getting emails for Wind Cave. By the way, congraculations on your new position at Niobrara.

Phyllis

Phyllis Cremonini
Volunteer Program Coordinator
Midwest Regional Office
601 Riverfront Drive
Omaha, NE 68102
(402) 661-1638
(402) 661-1983 (fax)
phyllis_cremonini@nps.gov
---- Forwarded by Phyllis Cremonini/Omaha/NPS on 08/05/2008 10:00 AM ----

Blk1492@aol.com
08/04/2008 07:03 PM EDT

To: phyllis_cremonini@nps.gov, foe@foe.org
cc: humanelines@hsus.org, info@cok.net, info@peta.org, mreisse@idausa.org
Subject: draft elk management murder plan - killing the elk based on inaccurate info

wind cave national park elk killing plan based on inaccurate, negligently obtained info

the scandal plagued us dept of interior NPS has a plan now to murder elk. bim wants to murder wild horses. our present anti environmental administration is pushing the murder of all kinds of wildlife. aphis kills birds, geese, etc. our national agencies that the public thinks are saving wildlife are instead embarked on killing all kinds of species. the whales and otters are being killed by oil and commercial fish profiteers. one has to wonder if the insane are running this asylum.
these creatures are God's creatures, put here to help man, not to simply bear its violence.

I oppose all elk killing. I think the nps mgt is insane.
I have specific comments on the following pages:
v - most of the elk are healthy not sick, so there is no rationale for killing them. it isnt elk "management" at all - its elk murder.

pg vi - elk "reduction" is elk murder.

gona con works and is highly usable immediately. sterilization works.

pg vii - I consider fertility control a far better method than wildlife murder. it should be used. feeding elk meat to poor people when it has lead shot in it is highly dangerous for those people - you are not doing them a favor.

viii - clearly there is enough food for a herd twice as big as present.

ix- people come to see wildlife, not to see it killed. this plan loses the big spenders - wildlife watchers and caters to the wildlife murderers - the cheapos.

x-elk have positive effects on forests too. that is overlooked on this polemic. it is never correct to kill wildlife based on what "if".

xi - elk herds can be maintained naturally. wolf packs would do it.

xiii-keeping the murder of wildlife secret is the dirty disgusting way that fws operates. keeping the public in the dark and not being truthful. who wants an agency that works like that working for america? this is an extremely sneaky, depraved project.

2-south dakota dept of game - is exactly that. a rabid group focused on paying their salries with dead bodies of wildlife and birds. they seek to kill more and more and more because the license sales pay their salaries. this is a depraved, degenerate way for any agency to work. it proves they are extremely anti environmental too. THIS DEPT IS HARDLY FIT TO WORK WITH. PROFITEERS FROM WILDLIFE KILLING IS WHAT THEY ARE

8 - QUOTING WHAT ANIMAL POPULATIONS WERE IN 2000 IS SERIOUSLY OUTDATED.

11- BURNING OF BRUSH POLLUTES THE AIR CAUSING FINE PARTICULATE MATTER TO DRIFT EAST, CAUSING LUNG CANCER, HEART ATTACKS, STROKES, ASTHMA, ALLERGIES AND PNEUMONIA.

12 FAR TOO MUCH ATTENTION IS PAID TO A FEW ANONYMOUS "LANDOWNERS" WHO COMPLAIN ABOUT ELK. WHEN THOUSANDS OF VISITORS COME TO SEE THEM, IT IS CLEAR WE NEED TO STOP LISTENING TO A FEW RANCHERS WHO ONLY BELIEVE THEIR PROFITEERING CATTLE SHOULD HAVE ALL THE LAND. THEY NEED TO BE SHUT UP

$87,000 DAMAGE IS MINISCULE - CERTAINLY NO JUSTIFICATION FOR BEATING UP ON ELK.

14-I DONT TRUST SDGFP SINCE THEY BIAS EVERYTHING TOWARD GAME ANIMALS. THEIR CONCLUSIONS ARE NOT BALANCED, BUT COMPLETELY SKEWED AND BIASED.

PG 30 WILDLIFE MURDERING HUNTERS ALWAYS WANT TO SHOOT IN PEOPLE'S BACKYARDS AND HAVE "ACCESS". IN MAINE, THEY SHOT TO DEATH A WOMAN HANGING OUT HER LAUNDRY IN THE BACK YARD - SHOWS THAT THIS CERTAINLY CAN NEVER BE ALLOWED AT ALL ANYWHERE. THENYOU HAVE DICK CHENEY SHOOTING HIS FRIEND IN THE FACE WHEN HE KNEW HIS FRIEND WAS NEARBY. SHOWS HOW THEY SHOOT UP EVERYTHING. THEY ALSO DONT KNOW ONE SPECIES FROM ANOTHER SO THAT ENDANGERED SPECIES ARE ENDING UP DEAD WHEN THEY ARE NOT SUPPOSED TO BE TOUCHED. AND THEN WHEN CAUGHT, THEY GET A SLAP ON THE WRIST. THIS SYSTEM STINKS TO HIGH HEAVEN

PG 32 - CAPTIVE BOLT AND EXSANGUINATION IS CERTAINLY NOT HUMANE. SUCH DEPRAVITY IS ISSUING FROM FWS. I THINK WE NEED A TOTAL CLEAN OUT OF THE NPS AGENCY. SOMETHING HAS GONE WRONG IN THEIR BRAINS.

33 the stress on elk if you SAW their antlers off is impossibly huge. again, an insane proposal

34 - no live elk should ever be "transported". they die.
the information written about cwd is designed to make people not care about the seriousness of this disease. it is clear this is a serious disease. i think the hunting community does not want to admit just how serious it is. kind of like amityville not wanting to admit the great white shark is offshore. same kind of nasty work by govt agencies who dont tell the public the truth. nps is not in the health industry and not qualified to say anything at all about this cwd problem.

pg 36 - view the "shark" video on captive bolt, which is not humane at all.

41- gona con is no more stressful than live transport or murder of the elk.

45- permission to use gona con is easily obtainable.
people take birth control, which is in the water. why this paranoia about more birth control, which is in the water from human use.

46 - treated elk can be clearlymarked.

147 - the game ranches brought in cwd. they make the animal lives in close quarters which brings on cwd. game ranches need to be outlawed.

169 - when you talk about animal urine, think about the manure pools around chicken growers, which are huge and allowed. that is an issue. the elk are not.

None of hte plans are suitable for american elk. this plan reminds me of a nazi death camp. this is america. we dont promote depravity like wildlife murder.

312 the bibliography is ancient, and hardly suitable for using as a basis for plans 20 years in the future. no wonder the plans are so screwed up.

367 - gona con is more effective than 90% of drugs on the market in america today. presently is is approximately 76% effective, which is a good high number.

b sachau
15 elm st
florhamp ark nj 07932

ELK MURDER PLAN FOR WIND CAVE PARK SOUTH DAKOTA
THE USE OF THE WORD "MANAGE" WHEN YOU MEAN MURDER OR KILLING IS DUPLICITOUS TO THE MAX. IT IS A SCAM ON THE AMERICAN PEOPLE. USE THE WORDS YOU MEAN - ELK MURDER IS WHAT IS BEING PROPOSED HERE. I CERTAINLY OPPOSE ALL SUCH MURDER OF ELK. STERILIZATION IS OK AND SHOULD BE THE ONLY MEANS OF POPULATION CONTROL, UNLESS BIRTH CONTROL GONA CON IS USED. I OBJECT TO ALL ELK MURDER IN THIS SITE.
B. SACHAU
15 ELM ST FLORHAM PARK NJ07932
SEND ME A PAPER COPY PLEASE SO I CAN COMMENT FURTHER ABOUT NATIONAL LANDS BEING USED AS KILLING FIELDS. I OBJECT TO SUCH OBSCENITY.

Correspondence ID 20

Vidal Davila/WICA/NPS
07/25/2008 09:03 AM MDT

To: Dan Foster/WICA/NPS@NPS, Tom Farrell/WICA/NPS@NPS, Sheryl Walde/WICA/NPS@NPS
cc:
bcc:
Subject: Fw: Hazing instead of hunting

Alt: FYI, Sheryl please print this out and add it to our administrative folder.

Thanks

Vidal

Vidal Davila
Superintendent
Wind Cave National Park, SD 57747
(605) 745-1129 (Office)
(605) 745-4207 (Fax)
---- Forwarded by Vidal Davila/WICA/NPS on 07/28/2008 09:02 AM ----

Patty Rooney
07/28/2008 09:21 AM CDT

To: Vidal Davila/WICA/NPS@NPS
cc:
Subject: Fw: Hazing instead of hunting

Vidal -

Because your draft Elk Management Plan/EIS is currently open to comment, I'm forwarding this message, considering it to be such a 'public comment.' However, since the Peters' included the Director as an addressee, we may ultimately be tasked to provide an individual response. Will wait to see if that tasking occurs before seeking a draft response from you, so for now this is FYI.

Patty

---- Forwarded by Patty Rooney/Denver/NPS on 07/28/2008 09:09 AM ----

"Steve & Diana Peters" <sp1504@vtc.net>
07/25/2008 11:26 AM MST

To: <David_Bama@nps.gov>
cc: <Gerry_Gauman@nps.gov>, <Patty_Rooney@nps.gov>, <Mary_Somar@nps.gov>
Subject: Hazing instead of hunting

Re: Hazing instead of hunting???????

To Whom it May Concern:

Your solution to the SD Wind Cave National Park problem is the most ridiculous unfounded & un-thought through cure for a very simple problem. Hunting is the most practical, least expensive & MOST common sense-way to control that elk population.

Correspondence ID 21

RECEIVED
AUG 13 2008
Wind Cave National Park

Superintendent Wind Cave National Park
2661 US Hwy 395
Hot Springs SD 57747

Re. Comments on Draft Elk Management Plan and EIS

Dear Superintendent

Enclosed is a letter from the BHSC that was written some time ago on the issue of hunting elk wijh in the park borders. While I would still support this as the best option to control numbers, I also realize the difficulties in accomplishing this task in Washington DC. I would still like to include the comments from the enclosed letter for the record.

While I am not certain any of the six alternatives will be all that effective. I would support the preferred alternative B as the lesser of all evils. Problems I see with this option is the cost of putting up the fence and then the maintenance needed. It will be interesting to see what the elk do when they are pressured back into the park. A seven foot fence may not be enough. I am also concerned about public reaction to hazing elk into the waiting arms of hunters.

While a controlled hunt with in the park is the least costly for taxpayers and the most practical, I do hope that the proposed alternative will be effective as the reduction of the elk herd is very important.

Questions
Why is there no budget associated with each alternative in the EIS? What is the estimated cost for fence and budget for future maintenance? Have you visited with all the adjacent landowners and are the sold upon this plan?

Jeffrey G Olson
1301 West Omaha STE 228
Rapid City SD 57701 605-342-3445

8-5-08

RECEIVED
AUG 1-3 2008
Wind Cave National Park

Congresswoman Stephanie Herseth-Sandlin
331 Cannon House Office Bldg
Washington DC 20515

Senator Tim Johnson
136 Hart Senate Bldg
Washington DC 20510

Senator John Thune
840E Dirksen Senate Office Bldg
Washington DC 20510

Dear Congressional delegation

The Black Hills Sportsmen's Club is concerned about the options to manage elk in Wind Cave National Park (WCNP), South Dakota. We would like you to please consider drafting and carrying through legislation that would change original enabling legislation to allow the potential option to reduce elk and other wildlife through regulated and controlled hunting. Current legislative language and Park Policy only employs removal of surplus elk through live trap and transfer or killing for research specimens. Wind Cave National Park will not consider hunting as one of the tools to reduce overpopulated elk and has eliminated it from further consideration in alternatives for control.

Since the discovery of Chronic Wasting Disease (CWD), there has been no management of susceptible big game in Wind Cave. The population of elk has more than doubled. This is a problem in many ways. The South Dakota Game Fish and Parks have spent hundreds of thousands of dollars in paying for elk damage on private land outside of the park over the years and have spent $87,000 in depredation work just last year. These are sportsmen's dollars. We do not have a dollar figure for adjoining private landowners but it is an additional financial burden on their operation including crop depredation and reduction of healthy native habitats.

In Jan. of 2005, WCNP produced a final internal scoping report. The Game Fish and Parks, through a cooperative agreement, was part of a science team to work with Wind Cave on elk management alternatives. The internal Environmental Impact Statement is available to the science team for internal review but the public is not privey to it at this time. Our Club's major concern is that when a draft EIS is available for public review, it will very likely not include an alternative to use regulated hunting as a viable method for elk population control. We feel this is short sighted and that Congress can decide if and when regulated hunting could be a logical, reasonable and financially feasible tool.

We feel is time to look at why we set up WCNP to begin with. It was originally formed to help restore our American game species. That goal has been reached to an epidemic. WCNP is ecologically imbalanced. Thus it may be time to look at the entire legislation on why this park was set up and redirect the management in a direction that provides some balance.

Please support HR 1179. This is the bill from Colorado by Sen. Udall and parallels our issue in Wind Cave National Park. And also note what stance North Dakota has taken on this problem. Terry Steinwand, North Dakota Game and Fish Director, states that hunting in national parks has previously not been allowed " but this is a special situation that requires a different approach.....Those elk are public wildlife resources and we strongly believe that if the park service needs to kill them, some type of controlled public hunt is certainly a reasonable alternative to include in the continuing evaluation process."

The park service has ignored this input from the public and its wildlife agencies in Colorado and North Dakota and now in Wind Cave National Park in South Dakota. Now is the time to join forces and correct this problem. Please note the enclosed resolution from the Western Association of fish and Wildlife Agencies.

Our Club has historically been concerned about wildlife and fisheries habitats across South Dakota and we work with other grassroots organizations and Game, fish and Parks to best manage wildlife habitats. And, one of the best tools to manage wildlife is hunting. We urge you to add this tool to the National Park Service toolbox. Hunting is a great tradition and way of life for South Dakotans.

Thanks for your time.

Ev Hoyt
President Black Hills Sportsmen's Club

CC: The South Dakota GF&P Commission
Darrell Shoemaker, Matt Thornblad
Leslie Kardaras, Phil Ossmas
Qusi Al-haj
Safari Club International
National Rifle Association

Correspondence ID 22

Mary Laycock
08/03/2008 05:07 PM
MDT

To: Dan Roddy/WICA/NPS@NPS, Tom Farrell/WICA/NPS@NPS, Dan Foster/WICA/NPS@NPS, Vicki Davis/WICA/NPS@NPS
cc:
Subject: Fw: From NPS.gov: Hazing Elk in Wind Cave National Park

I recieved this from the park's website mail.

Mary Laycock
Park Ranger
Wind Cave National Park
Hot Springs, SD 57747
605-745-1132

"The objective is to teach the student to see the land, to understand what he sees, and enjoy what he understands." Aldo Leopold
---- Forwarded by Mary Laycock/WICA/NPS on 08/03/2008 05:05 PM ----

insir_pilot49@yahoo.com
07/30/2008 11:20 AM
AST

To: mary_laycock@nps.gov
cc:
Subject: From NPS.gov: Hazing Elk in Wind Cave National Park

Email submitted from: /wica/index.htm

Mailing Address
John E Mello
42 Essex Street
Sanford, ME 04073
United States

I just finished reading an article on how the NPS plans on driving elk out of the Wind Cave National Forest so that hunters can kill them. Then the NPS plans on building a series of gates and fences to keep those animals from coming back into the park!!!??? This has to be the most Rube Goldberg approach to herd management I have ever heard of! It took 4 years of study to come up with this brilliant plan, gee, wonder how much that cost the taxpayers. Why are we spending millions of tax dollars to study and fund this ridiculous plan when hunting is the simplest remedy? Not only will hunting reduce the size of the herd, but generate revenue for the NPS at the same time. Change the legislation, don't waste herd earned tax dollars.

Correspondence ID 23

August 5, 2008

RECEIVED
AUG [illegible] 2008
Wind Cave National Park

TO: Superintendent

FROM: Thomas B. May

SUBJECT: Elk Management Plan for Wind Cave National Park

Of all the alternative plans suggested for elk management in Wind Cave, Alternative B appears to be the best. However, rather than just pushing the elk through gates in the park fence boundary to facilitate elk hunting outside the park, why not lay 100 to 200 yards of fencing down and haze or push the elk to the west into the Black Hills Forest and north along the Custer State Park boundary? Then after a selected number of elk have left Wind Cave, the fences be replaced. This would allow hunters to be able to harvest additional animals not only in the Black Hills but also Custer State Park via the South Dakota Game, Fish and Parks.

Thank you for allowing my comment.

Sincerely,

Thomas B. May

Thomas B. May
P.O. Box 5063
Custer, SD 57730

RECEIVED
AUG 06 2008
Wind Cave National Park

Correspondence ID 24

USDA | United States Department of Agriculture | Farm Service Agency | Fall River-Custer County Office, 339 S Chicago Street, Hot Springs, SD 57747-2323, (605) 745-5716, Ext. 2

August 14, 2008

RECEIVED
AUG 1 4 2008
Wind Cave National Park

Superintendent, Wind Cave National Park
26611 US Highway 385
Hot Springs SD 57747-9430

Subject: Comments on Elk Management Plan for Wind Cave National Park

Dear Mr. Superintendent;

As members of the USDA-Farm Service Agency County Committee board for Fall River and Custer counties we wish to make a public comment on the elk herd management plan for Wind Cave National Park.

We recognize the elk overstocking situation that the park finds itself in at this time. We agree that measures need to be taken to reduce the elk herd to more manageable levels. We understand that one option being considered is the possible release of 200 to 300 head of elk onto lands bordering the park. These lands may be Federally owned, State lands or privately owned. Our position is that this release of elk onto neighboring lands could cause severe overpopulation and increase elk herd depredation on grazing land and stock piled feed sources of private individuals.

Our position would be that any planned release of a large number of elk to surrounding lands should also include the cooperation of the South Dakota Game Fish & Parks (GF&P) Department. The GF&P should consider offering an increased number of elk hunting permits for the units that are covered by the elk release. These additional licenses would allow for the herd reduction that cannot be accomplished within the Wind Cave National Park boundaries at this time. This reduction would also reduce the depredation load on the private land owners adjacent to the Park.

We appreciate the pro-active planning that Wind Cave National Park is considering. The Park is working diligently to maintain a healthy elk herd population.

Comments filed by:
Fall River-Custer County Committee Members
USDA-Farm Service Agency
339 South Chicago Street
Hot Springs SD 57747

Cc: South Dakota State Game, Fish and Parks Department, Pierre SD

Correspondence ID 25

Rosebud Sioux Tribe
Tribal Historic Preservation Office
P.O. Box 809
Rosebud, South Dakota
Telephone: (605) 747-4255
Fax: (605) 747-4211
Email: rstthpo@yahoo.com

Preserving the Land, Cultural Heritage, Tradition for the Future Generation

Russell Eagle Bear
Officer

Kathy Arcoren
Administrative Assistant

June 30, 2008

RECEIVED
JUL 2 4 2008
Wind Cave National Park

National Park Service
Wind Cave National Park
26611 U.S. Highway 385
Hot Springs, SD 57747

Dear Mr. Davila,

We are responding to your letter dated June 18, 2008 in reference to the Elk Management Plan and the Environmental Impact Statement (EIS).

As the Tribal Historic Preservation Officer for the Rosebud Sioux Tribe I appreciate your notification of the undertaking and the awareness you are demonstrating for the archaeological sites and cultural heritage of Indigenous peoples.

In review of the area shown on the accompanying maps of your proposed undertaking we do not have sites listed in our data base. This does not preclude the possibility of a site of heritage importance being located by forest personnel or an archaeological contractor that may have an oral reference among the Rosebud people.

After careful consideration we recommend Alternative "B" – Hunting outside the park which is also the parks preferred alternative choice. We have chosen this route because it will maintain the elk population and the Game, Fish and Parks would administer annual hunts on the lands surrounding the park.

Thank you for your time and consideration of this letter.

Sincerely,

Kathy Arcoren
for Mr. Russell Eagle Bear
RST- THPO Officer

Correspondence ID 26

RECEIVED
JUL 3 1 2008
Wind Cave National Park

Couch Ranch

Ken & Vivian Couch
Po Box 16
13603 7-11 Road
Buffalo Gap, SD 57722

Ph 605-833-2370
Fax 605-833-2370
email couch@gwtc.net

July 29, 2008
WCNP Superintendent Vidal Davila
26611 US Hwy 385
Hot Springs, SD 57747
Dear Superintendent Davila
RE: Draft Elk Management Plan & Environmental Impact Statement Comments.

The elk management plan does NOT address the elk overgrazing problem of WCNP. It merely transfers the expense & management of elk reduction to production agriculture and the SD Game, Fish, & Parks.

The environmental impact statement did not indicate that elk were tested for Brucellosis as part of the Draft Elk Management Plan. Page 98 states the bison were "free of the disease brucellosis." It did not indicate if ALL of the bison were tested.

Yellowstone is presently addressing Brucellosis in their bison and elk and the disastrous financial effect it is having on production livestock agriculture. There needs to be an addendum to include testing for Brucellosis in the elk in WCNP.

A few years ago it was thought that the WCNP elk did not have any CWD. We need to be proactive and simply not assume that there is not any Brucellosis in WCNP elk. The elk need to be tested and some type of proactive vaccination program in place to prevent the disease.

The Actual cost in dollars of lost production to agriculture of takings of the grassland by the WCNP elk was not addressed. Grazing rights are sold as pasture rent for beef cattle. If the elk eat the grass, it is not available to production agriculture to be sold as pasture rent. The cost in lost available grass for cattle also needs to be addressed in the impact statement. There is a significant financial impact on area agriculture. Again an addendum is in order.

Sincerely,
Ken Couch

Correspondence ID 27

RECEIVED
JUL 2 2 2008
Wind Cave National Park

Couch Ranch

Ken & Vivian Couch
Po Box 16
13603 7-11 Road
Buffalo Gap, SD 57722

Ph 605-833-2370
Fax 605-833-2370
email couch@gwtc.net

July 16, 2008

I am unable to attend the public hearing July 21 in Sioux Falls. Please read my comments at that hearing. Thank you

RE: WCNP elk management plan:

WCNP has too many elk for the amount of habitat / grass land available. Therefore they intend to push the elk on the adjoining land. This land also has been in a drought situation for 7 years. While the recent rains are encouraging the grassland still needs more recovery time.

Taken May 20, 2008 with a motion camera attached to a fence on a game trail near WCNP.	***Many years of drought have taken their toll. We do not have enough grass for our existing elk let alone additional elk***

Production agriculture learned from the dirty thirty's that it is imperative to protect our grassland. Our neighbor lived through those times -- the mistakes that were made and how they were corrected. We need to remember our history and the lessons learned. Ranchers have decreased cow herds and / or leased grass elsewhere for their lifestock due to lack of available forage. We have not repeated

the dust bowl of the dirty thirties because of environmental protection practices put in place by private production agriculture.

Is is fair to ask production agriculture to donate forage to WCNP elk? In addition to the expense already made to protect the grassland. Pasture rent for a cow calf pair is running as high as $40 per month.

For the sake of example I choose to use $25 per month pasture rent for a beef cow. An elk is about 75 % the size of a beef cow, so pasture rent for an elk would be $ 18.75 per mounth. So 100 head of elk would eat $1,875 per month. In one year they would consume $22,500 worth of grass. 200 head $45,000 worth of feed. There is no mention of compensation to ranchers for this loss. This constitutes "taking without compensation"

I must also emphisis, that these ranchers have added the expense of trucking and pasture rent for their cattle because we have very little grass. While things look better because of recent rains, even if drought is over and the forage needs recovery time.

Of course, the statement will made about not having adequate funds . Three quarters of a million dollars has already been spend STUDING the elk problem.

Man as a Predator

*Historically WCNP has used man as a predator to control wildlife numbers. The SD Game Fish & Parks could manage of the Man as a predator program. Since this a national park the program could be open up nation wide. There could be a $20 non refundable application fee, half could go to WCNP and half to the GFP to implement and manage the program. If there were 100,000 applications, that would be **ONE MILLION DOLLARS EACH for the GFP & WCNP**, plus what ever would be charged for licenses. This could be ANNAUL income.*

Since we have chosen, not to put this in the income column, it should be expected to spent some money for "pasture rent". It is unfair to penalize ranchers when they are recovering from many years of a lingering drought.

Recently their has been some airplay, about brucillous in Yellowstone's wildlife. What assurances do we have, that WCNP wildlife are Bucceloulus free? The health of the food supply must be protected.

Sincerely,

Vivian Couch

RECEIVED
JUL 31 2008
Wind Cave National Park

Couch Ranch

Ken & Vivian Couch
Po Box 16
13603 7-11 Road
Buffalo Gap, SD 57722

Ph 605-833-2370
Fax 605-833-2370
email couch@gwtc.net

July 30, 2008
WCNP Superintendent Vidal Davila
26611 US Hwy 385
Hot Springs, SD 57747

Dear Superintendent Davila

RE: WCNP elk management plan & Environmental impact statement
Comments:

WCNP has too many elk for the amount of habitat / grass land available. Therefore they intend to push the elk on the adjoining land. This land also has been in a drought situation for 7 years. While the recent rains are encouraging the grassland still needs more recovery time.

Taken May 20, 2008 with a motion camera attached to a fence on a game trail near WCNP.	***Many years of drought have taken their toll.** We do not have enough grass for our existing elk let alone additional elk.*

The elk management plan does NOT address the elk overgrazing problem of WCNP. It merely transfers the expense & management of elk reduction to production agriculture and the SD Game, Fish & Parks.

Production agriculture learned from the dirty thirty's that it is imperative to protect our grassland. Our neighbor lived through those times -- the mistakes that were made and how they were corrected. We need to remember our history and the lessons learned. Ranchers have decreased cow herds and / or leased grass elsewhere for their livestock due to lack of available forage. We have NOT repeated the dust bowl of the dirty thirties because of environmental protection practices put in place by private production agriculture.

Is is fair to ask production agriculture to donate forage to WCNP elk.? In addition to the expense already made to protect the grassland. There is no mention of compensation to ranchers for this loss. This constitutes "taking without compensation"

While things look better because of recent rains, even if the drought is over, the forage needs recovery time.

Of course, the statement will made about not having adequate funds. Three quarters of a million dollars has already been spent STUDING the elk problem.

Man as a Predator

*Hisiorically WCNP has used man as a predator to control wildlife numbers. Today there are about 38 national parks that still use, Man as a Predator, to manage wildlife. The SD Game Fish & Parks could manage the Man as a predator program. Since this is a national park the program could be opened up nation wide. There could be a $20 non refundable application fee, half could go to WCNP and half to the GFP to implement and manage the program. If there were 100,000 applications, that would be **ONE MILLION DOLLARS EACH for the GFP & WCNP**, plus what ever would be charged for licenses. This could be ANNAUL income. It would provide an unknown amount of free advertising for WCNP & SD tourism in the form of news articles and stories in sportsman publications.*

Since we have chosen, not to put this in the income column, it should be expected to spent some money for "pasture rent". It is unfair to penalize ranchers when they are recovering from many years of a lingering drought.

Recently there has been much airplay, about brucillous in Yellowstone's wildlife. What assurances do we have, that WCNP wildlife are Bacciolus free? The health of the food supply must be protected.

Sincerely,
Vivian Couch

SCI
HUNTERS FIRST FOR HUNTERS

RECEIVED
AUG 21 2008
Wind Cave National Park

August 18, 2008

Via First-Class Mail, Postage Prepaid
and Facsimile (605) 745-4207

Superintendent Davila
Wind Cave National Park
26611 U.S. Highway 385
Hot Springs, South Dakota 57747-9430

Re: Comments on Draft Elk Management Plan and Environmental Impact Statement for Wind Cave National Park, South Dakota

Dear Superintendent Davila:

Safari Club International and Safari Club International Foundation ("SCI and SCIF") appreciate the opportunity to comment on the Wind Cave National Park Draft Elk Management Plan and Environmental Impact Statement (May 2008) ("Draft Elk Plan"), 73 Fed. Reg. 33453 (June 12, 2008). SCI and SCIF commend the efforts of the Park Service in compiling this impressive document. SCI and SCIF generally support the identified preferred alternative (Alternative B) and the analysis and approach the National Park Service has taken in the Draft Elk Plan. SCI and SCIF make one substantive suggestion—to substitute Alternative D for Alternative C as the secondary choice—as well as several minor suggestions for improving the Draft Elk Plan.

These comments will address the following issues:

- In their Draft Elk Plan, the Park Service fully justified the need for elk management.
- SCI and SCIF support the selection of Alternative B but recommend the selection of Alternative D as the secondary approach.
- The Park Service can consider Alternatives E and F now but should not implement them without further public involvement.
- The Park Service properly "Considered but Dismissed" the predator (Wolf) reintroduction alternative and should fully document all reasons for doing so.
- Additional points concerning safety, donation of meat in Alternative D, and clarifying certain statements about wolf reintroduction and the use of sharpshooters.

In these comments, SCI and SCIF also will note a few minor deficiencies in the Draft Elk Plan and make suggestions for improving the Draft Elk Plan.

Safari Club International - Washington DC Office
501 2nd Street, NE, Washington, DC 20002 • Phone 202 543 8733 • Fax 202 543 1205 • www.safariclub.org

Interests and Experience of SCI and SCIF

Safari Club International, a nonprofit IRC § 501(c)(4) corporation, has approximately 53,000 members worldwide, including many who live in the areas surrounding Wind Cave National Park (WCNP") and/or recreate within and in areas surrounding WCNP. SCI's missions include the conservation of wildlife, protection of the hunter, and education of the public concerning hunting and its use as a conservation tool.

Safari Club International Foundation is a nonprofit IRC § 501(c)(3) corporation. Its missions include the conservation of wildlife, education of the public concerning hunting and its use as a conservation tool, and humanitarian services. More specifically, the conservation mission of SCIF is: (a) to support the conservation of the various species and populations of game animals and other wildlife and the habitats on which they depend; and (b) to demonstrate the importance of hunting as a conservation and management tool in the development, funding and operation of wildlife conservation programs.

The conservation mission of SCIF is carried out by SCIF's professional staff in the Department of Wildlife Conservation under the guidance of the SCIF Conservation Committee. These activities include scientific research, enhancement of science-based wildlife management capacity in range states, and the compilation and dissemination of data. A significant percentage of SCI and SCIF's annual revenues, including a portion of the dues and fees paid by each member, goes to support SCIF's conservation efforts around the world. In addition, each individual chapter of SCI provides its own funding for conservation efforts locally and across the globe.

On staff in SCIF's Washington, D.C. Conservation Department Office are two professional wildlife biologists with more than 35 years of experience combined. They regularly conduct work with state wildlife management agencies and professional conservation organizations. Both staff biologists have professional backgrounds that specialize in ungulate research and management. They design, coordinate, supervise and monitor SCIF's conservation efforts in the United States and around the world. SCI and SCIF's conservation efforts focus on the concept of the "sustainable use" of wildlife. "Sustainable use" recognizes that the utilization of wildlife often produces benefits that provide incentives for conservation.

The Park Service's consideration of elk management implicates these interests, particularly as one alternative involves increased hunting opportunities and one alternative involves using qualified volunteers (most of who would come from the hunting community) for culling operations. SCI and SCIF have long been involved in the management of game and other wildlife on National Parks and other federal lands. SCI and SCIF have filed comments regarding elk and deer management at Rocky Mountain

National Park and Catoctin Mountain Park.[1] SCI and SCIF have been leaders in support of the use of qualified volunteers from the hunting community assisting NPS management efforts of overpopulations of wildlife on NPS lands. SCI and SCIF are currently participating in litigation in District Court in Colorado to help defend the elk management plan adopted at Rocky Mountain National Park that includes the use of qualified volunteers for culling activities. SCI and SCIF have both the interest and experience to comment on the Draft Elk Plan.

The Park Service Has Well Documented the Need to Manage Elk at WCNP

The need to manage the elk population on WCNP appears to be beyond dispute. Some of the adverse impacts of the overpopulation of elk are aptly summarized in the Executive Summary of the Draft Elk Plan:

> Adverse effects on hardwoods would continue and potentially worsen to extend over a larger part of the park as the herd grows under the no-action alternative. Growth of the elk herd is likely to continue existing impacts on plant production in meadow riparian and shrubland areas in the park, and may worsen them. Adverse impacts from losses in biomass, productivity and species changes are also likely as the elk population approaches food-based carrying capacity. [Page x]
>
> Wind Cave provides habitat for approximately 200 bird, 48 mammal, 11 reptile, and 6 amphibian species (Uhler 2002), many of which can be affected by habitat over-use by elk. [Page x]
>
> The increasing elk herd resulting from implementing the no-action alternative would increase competition for forage and trampling of prairie dog towns, with adverse impacts on black-footed ferrets. Reductions in habitat for prey animals related to over browsing by elk, and reductions in prairie dog numbers that may need to take place under this alternative could have adverse effects on bald eagles in the park. [Page xi]
>
> An elk management plan is needed at Wind Cave National Park because the population is not regulated by natural ecosystem processes. This may result in adverse effects on:

[1] SCI and SCIF have also commented on predator management and have participated in litigation over ESA issues, including gray wolf delisting in the Western Great Lakes and in the Northern Rocky Mountains, and grizzly bear delisting in the Yellowstone area.

- native vegetation
- wildlife habitat
- wildlife health
- other wildlife species
- neighboring land uses [Page 5]

The more detailed discussions in the Draft Elk Plan of the impacts of a growing elk population in WCNP fully substantiate the need for elk management:

DEIS Page(s)	Topic
11-12	Overview of impacts
137-147	Impact on elk
182-190	Impact on vegetation; "Current localized, major adverse effects on hardwoods would continue and potentially worsen to extend over a larger part of the park as the herd grows under the no-action alternative. ... Growth of the elk herd is likely to continue existing impacts on plant production in meadow, riparian and shrubland areas in the park, and may worsen them, causing long-term, adverse and moderate impacts to these vegetative types. ... moderate to major adverse impacts from losses in biomass, productivity, and species changes are also likely as the population approaches food-based carrying capacity."
201-207	Impact on other wildlife; "Allowing the elk herd using the park to reach 1,200 could produce this reduction in biodiversity in the park, particularly if it persists for many years. If it occurs, it would be a moderate to major impact on wildlife habitat."

In such situations, SCI and SCIF support science-based wildlife management efforts aimed at wildlife population control.

SCI and SCIF Generally Support Alternatives B and D

SCI and SCIF support the choice of Alternative B (Hunting Outside the Park) as the Park Service's preferred alternative and the environmentally preferable alternative. SCI and SCIF also suggest greater consideration of Alternative D (Sharpshooting) as the secondary alternative instead of Alternative C (Roundup and Live Shipment or Euthanasia). From their inception, SCI and SCIF have supported the use of well-

regulated hunting as a means of management wildlife. As noted above, advancing this type of wildlife management is one of the purposes of SCI and SCIF. SCI members enjoy contributing the proper management of wildlife through their hunting activities.

Hunting of elk outside of WCNP already helps control the elk population within the Park. *See generally* Draft Elk Plan at 14-15, 25, 27-30. It makes perfect sense to increase the opportunities for hunting outside the Park to both decrease the elk population to manageable levels and maintain those levels. SCI and SCIF assume that the State of South Dakota supports these increased opportunities for elk hunting on state and private lands surrounding WCNP. This alternative would increase revenues to the South Dakota Department of Fish, Game and Parks ("SDDFGP") through increased tag sales. It would also increase beneficial socio-economic impacts from increased hunting. If these facts are not already reflected in the Draft Elk Plan, the Park Service should make it clear in the final plan.

Regardless of the alternative chosen, SCI and SCIF support the Park Service continuing to coordinate and consult with interested parties, such as SCI and SCIF, and in particular with the SDDFGP. Alternative B will obviously require the cooperation of the SDDFGP in managing the hunts outside the Park. SDDFGP also could be instrumental in qualifying volunteers to assist with culling activities under Alternative D. As is being demonstrated in Rocky Mountain National Park, SCI and SCIF could be called on to assist with management activities, whether it is hunting outside the Park or as volunteer sharpshooters within the Park.[2]

For a number of reasons, SCI and SCIF suggest that the Park Service adopt or identify Alternative D (Sharpshooting, including using qualified volunteers) as the method to use if Alternative B (Hunting Outside the Park) does not provide the expected declines in elk population, whether for initial reductions or maintenance purposes. The Draft Elk Plan appears to identify Alternative C (Roundup and Live Shipment or Euthanasia) as the secondary method, Draft Elk Plan at vii, but also suggests that Alternative D would work well in conjunction with Alternative B. *Id.* at 25.

First, as you are aware, the Superintendent of Rocky Mountain National Park has selected culling/sharpshooting, including by qualified volunteers from the hunting community, as the *primary* method of managing elk populations at that Park. Officials there concluded that this method was both safe and effective.

Second, the laws and policies governing management of wildlife at National Parks in general and WCNP in particular authorize the use of qualified volunteers to help with

[2] When SCI informed its members of the possible opportunity to assist in elk culling activities within Rocky Mountain National Park, dozens expressed their interest in participating.

culling activities. The attached "Legal Analysis" (SCI August 2008) addresses this point in detail.

Third, a review of the analyzed impacts from the two alternatives reveals that Alternative D is a better second choice than Alternative C. The cost of Alternative D is estimated to be $646,000 for the life of the elk management plan, roughly 15-20 years. Draft Elk Plan at 48. It appears that the initial estimated cost of $470,000 could be reduced if the Park Service used skilled volunteers from the hunting community. SCI recommends that the Park Service include an estimate of initial costs using skilled volunteers for comparison purposes. The cost of Alternative C is estimated at $2,000,000 for the life of the plan. *Id.* This figure is significantly higher, with most of the increased cost coming in the maintenance phase.

The sharpshooter method offers flexibility if there is a need to reduce the elk population outside of regular hunting seasons, but a large-scale roundup operation is not called for. Once set up, a program using qualified volunteers and other sharpshooters could quickly and precisely address overpopulation needs. The experiences of the Park Service at Rocky Mountain National Park should help with setting up an efficient and well-run program at WCNP. In addition, the time of the year in which the initial, and presumably the maintenance, phase could occur is much greater with Alternative D than Alternative C. *Id.* at 59 (Alternative D, August to March; Alternative C, January to February).

Finally, it appears that Alternative D provides benefits or avoids adverse impacts not provided or avoided by Alternative C:

- Alternative D, to the extent carcasses are left in the field, would provide some benefits to scavengers and to the soils by adding nutrients (*id.* at 60, 68);
- Alternative C would involve more stress to individual elks (*id.* at 65);
- Alternative C would cause adverse impacts to black footed ferrets (*id.* at 73; and
- Alternative C would cause minor long-term site specific adverse impacts to archeological resources, while Alternative D would not (*id.* at 74).

SCI and SCIF support the selection of Alternative B as the preferred alternative but recommend that the Park Service reconsider its initial conclusion that Alternative C represents the best second option. Alternative D appears to be a better choice, especially for the maintenance phase.

While the Park Service Can Consider Alternatives E and F now, it Should Not Further Consider or Implement those Alternatives without Additional Public Review and Comment

SCI and SCIF do not strongly oppose the preliminary ***consideration*** of Alternative E and F now, but further public notice and comment must precede any consideration of actually putting such methods into effect. Right now, the Park Service is considering these alternatives if and only if certain problems are resolved and certain conditions are met. For example, the Park Service correctly identified the following concerns that would need to be resolved before consideration of these options:

> At this time, sterilization has not been proven through science to effectively manage wildlife populations. The park will not use this alternative for population maintenance unless future scientific studies prove sterilization methods to be effective and efficient means of elk population control and the preferred and adaptive management efforts fail to maintain elk population within the target range. [Page 41]
>
> At this time, fertility control agents have not been proven through science to effectively manage wildlife populations. The park will not use this alternative unless future scientific studies prove fertility control agents to be effective and efficient means of elk population control and the preferred and adaptive management efforts fail to maintain elk population within the target range. [Page 43]
>
> To be considered feasible for the park's use as an elk management option, fertility control agents would need to meet the following criteria, much of which is referenced from the Rocky Mountain National Park Draft EIS, Elk and Vegetation Plan (NPS 2006c 65–67).
>
> - Effective with a single treatment. ...
> - At least 85% effective. ...
> - Appropriate approvals and certifications. ...
> - Safe for treated animals. ...
> - No recognizable behavioral effects. ...
>   - Reduced courtship, rutting, and breeding behavior. ...
>   - Increased courtship, rutting, and breeding behavior. ...
> - Safe for non-target animals. ...
> - Multi-year effectiveness. [Pages 44–45]

In addition, SCI and SCIF agree that the use of sterilization and contraceptives has not been established to be effective for reducing elk populations in the wild and consequently are not viable options at this time and should not even be considered until research has

shown such methods to be both effective and safe. SCI and SCIF make the following additional observations about these procedures:

- Physical trauma is inherent to surgical procedures, which often causes disruption to behavior, eating patterns, and physiological processes of wild ungulates. Consequently, surgical procedures temporarily or permanently compromise the health of the animal.
- The stated incidental mortality rates for fertility treatment dramatically under-represent the actual mortality rates for this group of animals. With the risk of death being equal for each treatment, handling animals annually or multiple times per year soon results in "treatment" becoming the most likely cause of mortality for each individual.
- Unless significant improvements are made to both the fertility treatment and the associated handling techniques, fertility control represents the least humane form of treatment.

If at some time in the future the Park Service believes that these problems are resolved and conditions are or might be met, it must give the public an opportunity to comment on both whether the conditions are indeed met and, if they are, whether employing either or both of these alternatives makes sense in light of the facts at that time. For example, the Park Service currently projects a cost of sterilization at $10,000 per female elk, an astoundingly high figure. Draft Elk Plan at 43. If this alternative warrants future consideration, the projected cost at that time (whether higher or lower) would be an important factor on which public could comment. The public cannot offer fully informed comments now on the actual selection of these alternatives as methods to achieve the goals of the plan.

Finally, SCI and SCIF fully agree that if these methods are ever seriously considered in the future, the Park Service should consider them only for purposes of maintaining the population of elk in WCNP at some particular level. And they should be considered only if the Park Service concludes that Alternatives B, C, and D are not maintaining the populations sufficiently.

The Park Service Properly "Considered but Dismissed" the Predator (Wolf) Reintroduction Alternative and Should Fully Document all Reasons for Doing So

SCI and SCIF fully support the Park Service's decision to consider but dismiss from further consideration the predator (wolf) reintroduction alternative. Draft Elk Plan at 52. The reasons for dismissing this alternative from further consideration are sound and well documented. SCI and SCIF offer only the following additional reason in support of dismissing this alternative from further consideration. An exclusionary fence sufficient to prevent wolf movements would also prevent or disrupt the daily, seasonal and annual movements of other game and nongame animals. Such disruptions would likely have

greater ecological consequences than any other alternative. SCI and SCIF would adamantly oppose use of exclusionary fencing under these circumstances.

The introduction of an endangered species is a complicated matter. Not only does it require the consent and active cooperation of the U.S. Fish and Wildlife Service and the relevant state fish and game agency, but it also depends upon the tolerance of the public at large. Due to federal ESA requirements, the conservation of the endangered animal becomes a priority, making most interactions and conflicts with members of that species subject to federal penalty. However, wolves, endangered or not, are a predator species that require their own management strategies to prevent them from harming livestock and pets and from having unacceptable impacts on some wild ungulate species populations and behaviors. States such as Michigan, Wisconsin, Minnesota, Wyoming, Montana and Idaho have all experienced first-hand the difficulty of trying to deal with the predatory behaviors of gray wolves without violating federal law. Wolves should not be regarded as a tool for management of other species, if at all, until all ESA restrictions on the management of this predator species are removed.

In addition, although the discussion in the Draft Elk Plan is adequate, the Park Service should ensure that it reflects all points discussed and considered in reaching the conclusion. For example, the Draft Elk Plan says that the "reintroduction of wolves to accomplish population goals was discussed in detail ...." Page 52. SCI and SCIF understand that the Park Service had extensive informal discussions with the SDDFGP over this option. Yet the only reflections of the state's involvement in considering but dismissing this option appear to be a mention of the state on page 52 and the state's letter found in Appendix H (located at page 581). Although SCI and SCIF do not know the extent of discussions with the U.S. Fish and Wildlife Service, the Draft Elk Plan also should reflect those discussions.

The NEPA regulations and case law on judicial review of agency decisions related to alternatives considered but dismissed support that the Park Service has made the right decision. These authorities can also guide the Park Service in providing sufficient justification for its decision. An agency has a duty to consider alternatives to a planned course of action to satisfy its NEPA requirements. However, the choice between whether these alternatives are given a full environmental analysis or dismissed from further review is at the agency's discretion. NEPA regulations require that an agency shall, "for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." 40 C.F.R. § 1502.14(a).

The courts review whether an agency properly dismissed an alternative from more detailed study and discussed it sufficiently under the "rule of reason" standard. *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195 (D.C. Cir. 1991). "As the phrase 'rule of reason' suggests, we review an agency's compliance with NEPA's requirements deferentially. We uphold an agency's definition of objectives so long as the objectives that the agency chooses are reasonable, and we uphold its discussion of alternatives so

long as the alternatives are reasonable and the agency discusses them in reasonable detail." *Id.*

Courts have found this duty satisfied when an agency gives a reasonable explanation for why it has rejected an alternative from consideration. An agency is not required to "analyze the environmental consequences of alternatives it has in good faith rejected as too remote, speculative, or as in this case, impractical or ineffective." *City of Aurora v. Hunt*, 749 F.2d 1457, 1467 (10th Cir. 1984), *overruled on other grounds by Village of Los Ranchos De Albuquerque v. Marsh*, 956 F.2d 970 (10th Cir. 1992); *see also Miller v United States*, 654 F.2d 513, 514 (8th Cir. 1981) ("In preparing an EIS, an agency only need consider reasonable alternatives to the proposed action.").

Although the Park Service appears to have reasonably explained its decision to dismiss the predator reintroduction alternative from further consideration, SCI and SCIF recommend that the Park Service fully describe all the reasons for dismissing wolf reintroduction and the extent of its consideration. SCI and SCIF are currently involved in litigation in U.S. District Court in Colorado over the Rocky Mountain National Park Elk Management Plan. In this case, wolf advocates have sued the Park Service for failing to consider the introduction of fertile wolves as an alternative for elk population management. Plaintiff in that litigation argues that the consideration and dismissal of such a strategy did not fulfill the Park Service's NEPA obligations. In light of this litigation, and the possibility that the Park Service's decision not to further consider the wolf reintroduction alternative will be challenged in court, the Park Service should ensure that the record fully reflects the depth of its consideration of this alternative and the reasonableness of its decision to dismiss this alternative from further consideration.

Additional Points

SCI and SCIF make the following additional points.

- The third point from the bottom of page v of the Executive Summary of the Draft Elk Plan states that "[a]ll elk management activities would be conducted in a manner which ensures human health and safety of staff and contractors ...." This point should include mention of the "skilled volunteers" who are part of Alternative D. *See id.* at vi.
- SCI and SCIF agree that the Park Service should try to donate elk meat to individuals or charities under Alternative C, if it is safe to do so (see Draft Elk Plan at 33-34), but suggest that the Park Service consider this option under Alternative D as well. SCI has long supported such humanitarian efforts through its "Sportsmen Against Hunger" program. The Rocky Mountain National Park Elk Plan contemplates that the meat harvested by qualified volunteers would be donated, with a small portion available to the volunteer. *See* Rocky Mountain National Park Elk Management Plan Record of Decision, Rocky Mountain National Park, Final Environmental Impact Statement and Elk and Vegetation

Management Plan, Record of Decision (Feb. 15, 2008) at 3, 9. http://www.nps.gov/romo/parkmgmt/upload/rod_evmp_signed_2-15-08.pdf. It appears that if it is feasible there, it should be feasible in WCNP.

- The discussion of wolf reintroduction in the Yellowstone basin on page 138 needs to be clarified. The Draft Elk Plan states: "This has been further substantiated 10 years into the reintroduction effort by 15 North American wolf experts recently predicting that even 100 wolves inside the park would result in no more than a 20% reduction in elk (NPS website, Dec 2007)." This suggests that around 2005 (10 years into reintroduction of wolves in Yellowstone), the 15 experts made the prediction discussed. The Park Service website says "Instead, 15 North American wolf experts predicted that 100 wolves in Yellowstone would reduce the elk by less than 20%, ten years after reintroduction." Although this statement about Yellowstone is ambiguous, SCI and SCIF read it to mean that the 15 experts predicted—before reintroduction started—that ten years into reintroduction, wolves would have the stated impact. A prediction made before reintroduction is different than a prediction made ten years into the reintroduction, when presumably the experts would have information about the actual impact of the reintroduced wolves on elk. The Park Service should confirm the meaning of the Park Service Yellowstone website and clarify its statement on page 138 of the Draft Elk Plan.
- The discussion on pages 50-51 that professional sharpshooters are more efficient and effective than hunters (*i.e.*, non-sharpshooters in a sport hunting situation) is not well supported and is not necessary to support the decision to dismiss without further consideration the alternative of authorizing a sport hunt within WCNP. The single study in support of the statement that "Sharpshooters are found to be more efficient than hunters in meeting ungulate reduction goals" is insufficient to support such a broad statement about the relative efficiency of the two methods. There is much uncertainty and debate about the efficiencies of the two methods. The particular facts of a particular situation would dictate the appropriate approach. In addition, the Park Service does not address the cost issue, which would obviously be relevant to a detailed analysis of this issue. But here, as the Park Service prohibits hunting in WCNP, the Park Service's statements about the efficiencies of the sharpshooting and sport hunting options are unnecessary. For all these reasons, SCI and SCIF recommend that the Park Service remove references to the alleged efficiencies of professional sharpshooting, or at least note that there are uncertainties and debate about this issue. Finally, the Park Service should make clear that it is not passing judgment on the relative efficiencies of using paid professional sharpshooters versus skilled volunteer sharpshooters in a non-hunting situation.

SCI and SCIF appreciate the opportunity to comment on the Draft Elk Plan for WCNP. The Park Service has done a very thorough job of preparing the Draft Elk Plan, subject to the comments made above. Please contact Anna Seidman (aseidman@safariclub.org) or

Doug Burdin (dburdin@safariclub.org), 202-543-8733, if you have any questions or we can provide any further assistance.

Sincerely,

Merle Shepard

Merle Shepard
President,
Safari Club International
Safari Club International Foundation

Safari Club International - Washington DC Office

Legal Analysis of Why Members of the Hunting Community May Assist in a Wildlife Population Reduction Effort To Manage Overabundant Wildlife Populations on National Park Service Lands, Including Wind Cave National Park (Safari Club International - August 2008)

1. Nothing in the statutes, regulations and policies that establish the authority of the National Park Service prevent the Park Service from utilizing members of the hunting community to assist an individual park and/or the state wildlife management authority in managing, culling or reducing an overabundant wildlife population on park land, much as the Park Service has used professional sharpshooters.

2. The National Park Service Organic Act grants the Secretary of the Interior the authority to provide "in his discretion" for the destruction of such animals or such plant life as may be detrimental to the use of any of said parks, monuments, or reservations. 16 U.S.C.A. § 3.

3. Statutory provisions applicable to the parks give the Park Service broad authority over resource management. For example, one of the statutory provisions that governs the Wind Cave National Park directs the Secretary of the Interior "to prescribe such rules and regulations and establish such service as he may deem necessary for the care and management of the" Park.

4. The regulations that the Secretary of the Interior has promulgated for the purpose of administering the National Park System allow the Secretary or a Park Superintendent to manage a park's overabundant wildlife using individuals from the hunting community as a wildlife management resource. Although there are regulations, such as 36 C.F.R. Section 2.2 that restrict hunting activities on Park Service lands, such rules are not applicable in the culling situation, which is not hunting. Instead, Park Service regulations that permit the Park Service and its agents to conduct activities necessary to counteract threats to park resources govern. For example, 36 C.F.R. § 1.2 specifically states that:

> **(d) The regulations contained in parts 2 through 5, part 7, and part 13 of this section shall not be construed to prohibit administrative activities conducted by the National Park Service, or its agents, in accordance with approved general management and resource management plans, or in emergency operations involving threats to life, property, or park resources.**

5. Similarly, Park Service Management Policies do not prevent the Park Service from utilizing members of the hunting community as agents of the Park Service or state wildlife management authority for a culling (i.e., non-hunting) operation. For example, policy provision 4.4.2.1, entitled "NPS Actions That Remove Native Plants and Animals" acknowledges the Service's use of "***others*** to remove plants or animals" but does not restrict the term "others" to include only paid sharpshooters. The same policy provision recognizes the use of "destruction of animals by authorized agents," but does not restrict the term "authorized agents" to individuals who are paid for their sharpshooting skills.

Correspondence ID 30

Name:	Dennis Brady
Organization:	
Organization Type:	I - Unaffiliated Individual
Address:	818 N Spring Luverne, MN 56156 USA

Correspondence Text

Please consider to be opening up hunting licenses to people who own land in Custer County, even if they are from out of state. Because we pay the taxes for Custer County and we should have the same rights as residents of Custer County.

Correspondence ID 31

Name:	Dean Fitzler	
Organization:	Rocky Mountain Elk Foundation	Member
Organization Type:	I - Unaffiliated Individual	
Address:	4001 South Cresent Drive Sioux Falls, SD 57106 USA	

Correspondence Text

What they are planning on doing is a poor second choice, Hunting would be my first choice. I understand that my first choice would be like writing a new first amendment to the constitution. I do understand how difficult that would be. I wish the government would move faster to get the fence up.

Correspondence ID 32

Name:	Gary Romey
Organization:	
Organization Type:	I - Unaffiliated Individual
Address:	27724 Scenic Road Hot Springs, SD 57747 USA

Correspondence Text

I am in favor of letting the Elk out of the park in accordance with Game Fish and Parks and with land owner tolerance.

An option of opening up the Casey land would be looked at as a place for a separate Elk unit to have Elk pushed into and made a unit for hunting by the Game Fish and Parks.
As an alternative, I feel that the limited sharp shooting in the park should remain an option.

The option of sterilization as an alternative is ridiculous, for cost reasons, health hazards for other wildlife and possible health hazard for human use. I see this as an idea contrived by other idiots not familiar with nature and wildlife issues.

Correspondence ID 33

SD ANIMAL INDUSTRY BOARD
411 South Fort Street
Pierre, South Dakota 57501-4503
Phone: (605) 773-3321
Fax: (605) 773-5459

RECEIVED
SEP 0 9 2008
Wind Cave National Park

September 8, 2008

RECEIVED
SEP 0 9 2008
Wind Cave National Park

Vidal Davila, Park Superintendent
Wind Cave National Park
26611 US Hwy 385
Hot Springs, SD 57747

Dear Superintendent Davila:

I apologize for not timely commenting on the Draft Elk Management Plan and Environmental Impact Statement for Wind Cave National Park (WCNP).

As you perhaps know, the South Dakota Animal Industry Board (SDAIB) and State Veterinarian have worked with WCNP many times in the past.

A brief review of correspondence includes:

1982	State veterinarian's letter quarantining WCNP for Brucellosis in Buffalo
1982 – 1990	Various MOU agreements between WCNP and SDAIB
1998	WCNP not willing to continue 1990 MOU without significant changes leading to failure to renew MOU
2002	Comment on Chronic Wasting Disease research projects by WCNP
2002	Information on Chronic Wasting Disease confirmed in WCNP animals

In conversation with WCNP past Superintendent Linda Stoll and her staff via telephone and at a public scoping meeting in Pierre I commented that serious attention should be given to elk and deer population management within WCNP.

My comments were to the effect that WCNP is home to an extremely high incidence of CWD per acre. Further comments were that I'd recommend the park immediately repair all fences, especially the border with Custer State Park to preclude further spread of this disease to other cervidae in the State, especially to elk and deer within Custer State Park.

Comments now are similar. I understand that generally speaking, Alternative B appears to have the most general support of wildlife interests, however I have the following concerns as Alternative B does NOT exhibit sound science in disease control per:

- Intentionally equalizing pressure by lowering fences and hazing animals into a shooting area outside the fence on a seasonal basis only exacerbates the disease spread and furthers contamination of state and private land outside the fenced park.
- Effective population management of elk must be combined with effective management of deer to reduce the prevalence of CWD and the risks of other diseases becoming established in the population.

Therefore the SDAIB strongly recommends that WCNP effectively repair fences, properly confining the animals that are on the property of the park, and then drastically reduce the CWD susceptible animal population within the park. WCNP consists of less than 40,000 acres. This is not as large as several privately owned ranches that have effectively controlled animal populations and eradicated diseases. WCNP through a quarantine and quarantine release period demonstrated in the 1980's that its animals can be effectively managed, tested, and harvested to reduce and eliminate disease.

Harvesting the animals by shooting seems a very practical method to reduce populations to scientifically justified levels for animal health and public safety. However this harvest should be restricted to the fenced park area and elk should not be directed to lands outside the park borders.

The statute below may be reviewed by WCNP prior to implementing actions including translocations other than those within the park:

40-5-8. Board powers in suppression of contagious diseases and parasites--Regulation of importation, release, sale, loan, lease, or distribution of animals--Violation as misdemeanor. *If written notice is given to the owner or keeper of any animal that a quarantine is established, the Animal Industry Board may take any action necessary to control, prevent, suppress, and eradicate any contagious, infectious, epidemic, and communicable disease and infestation of destructive parasites among the domestic and nondomestic animals of this state. The board may regulate or prohibit the importation, release to the wild, sale, loan, lease, or other distribution or translocation of any animal into and within the state to ensure documentation as disease-free. The Animal Industry Board may regulate or prohibit such transactions between and among private entities, local government agencies, state government agencies, federal government agencies, and nonprofit and other corporations, including, but not limited to, game farms, game preserves, zoos, exhibitions, sales, humane societies, and rehabilitation facilities. A violation of this section is a Class 1 misdemeanor.*

Source: *SDC 1939, § 40.0501; SL 1950 (SS), ch 9, § 1; SL 1982, ch 282, § 1; SL 1989, ch 349, § 1; SL 1990, ch 325, § 35.*

Please feel free to contact me anytime.

Sincerely,

SD Holland DVM

Sam D. Holland, DVM
State Veterinarian and Executive Secretary
South Dakota Animal Industry Board

SDH/lad

Cc: Governor Mike Rounds
Secretary Jeff Vonk
Secretary Bill Even

Glossary and Index

GLOSSARY

Biodiversity: the diversity of plant and animal life in a location, in this case, Wind Cave National Park.

Browsing: Feeding on the shoots or twigs of shrubs by elk or deer.

Captive bolt: Action resulting in concussion and trauma to the brain causing immediate unconsciousness and destruction of brain tissue. While the destruction of brain tissue with the penetrating captive bolt may be sufficient to result in death, operators are advised to ensure death by other means—for example, exsanguination.

Carrying Capacity: The maximum number of animals of a species that can live in a given environment. Carrying capacity is not a static number but rather a number that changes with short-term weather and forage conditions and long-term gradual changes in habitat and vegetation communities (often called "biological carrying capacity").

Cervid: any member of the deer family, Cervidae, comprising deer, caribou, elk, and moose, characterized by the bearing of antlers in the male or in both sexes.

Chronic wasting disease: a fatal brain disease of deer and elk that is believed to be caused by an abnormal protein called a prion. Animals infected with CWD show progressive loss of weight and body condition, behavioral changes, excessive salivation, increased drinking and urination, depression, loss of muscle control and eventual death. The disease can not be diagnosed by observation of physical symptoms because many big game diseases affect animals in similar ways.

Class I airshed/area: as defined in the Clean Air Act, the following areas that were in existence as of August 7, 1977 are considered Class I: national parks over 6,000 acres, national wilderness areas and national memorial parks over 5,000 acres, and international parks.

Cumulative impacts/effects: the impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7).

Day-night average sound level (DNL): The 24-hour average noise level with a 10-decibel (dB) penalty for nighttime noise events between10:00 p.m. and 7:00 a.m.

Density dependent: Having influence on individuals in a population that varies with the degree of crowding within the population.

Emigration: Moving away from one place to another.

Endangered Species Act (ESA): Administered by the Interior Department's U.S. Fish and Wildlife Service and the Commerce Department's National Marine Fisheries Service, the purpose of the ESA is to protect and recover imperiled species and the ecosystems upon which they depend. Under the ESA, species may be listed as either "endangered" (in danger of extinction) or "threatened" (likely to become endangered within foreseeable future).

Encephalopathy: Degenerative brain disease.

Endemic: Prevalent in or peculiar to a particular locality, region, or people.

Environmentally preferred alternative: The alternative that causes the least damage to the biological and physical environment and which best protects, preserves, and enhances historic, cultural, and natural resources. The regulations for implementing the National Environmental Policy Act (Section 1505.2(b)) require that, in cases where an EIS has been prepared, the Record of Decision must identify, among other things, the environmentally preferred alternative be identified.

Euthanasia: To cause death in a humane manner; literally "good death".

ELCR: Excess lifetime cancer risk.

Exclosure: A fenced area designed to exclude one or more species.

Exotic: A species that was introduced from another area as a result of disturbance or human activity.

Exsanguination: To drain of blood (e.g. by cutting a major blood vessel).

Extirpation: Disappearance or elimination from a specific geographic area.

Fauna: Animals, especially the animals of a particular region or period, considered as a group.

Fertility Control Agents: A product (drug, vaccine, chemical, etc.) which when applied to an animal (orally, topically, or via injection) decreases the animal's ability to reproduce.

Flora: Plants considered as a group, especially the plants of a particular country, region, or time.

Forage allocation model: Standardized forage allocation methodology whereby, in the case of Wind Cave, approximately 25% of the grassland vegetation in the park was set aside or allocated for the major grazing species (i.e., bison and elk). This model was used to generate the target range of the park for elk of 232 to 475 animals (NPS 2006f).

Forbs: Non-woody, broad-leaved flowering plants that are not grasses or grasslike.

Geomorphology: the study of the characteristics, origin, and development of landforms.

Grazing: Feeding on grasses or grass-like plants by elk, deer, bison or cattle.

Gregarious: Highly social.

HAP: Hazardous air pollutants.

Herbaceous: A plant without a persistent above ground woody stem.

Herbivory: The act of feeding on vegetation.

Immigration: Migration into an area or place.

Impairment: Impacts which harm the integrity of park resources or values (e.g., park scenery, wildlife, cultural resources). An impact to any park resource or value may constitute impairment, but an impact would be more likely to constitute impairment if it had a major or severe adverse effect upon a resource

or value whose conservation is necessary to fulfill specific purposes identified in a park unit's establishing legislation or proclamation, is key to the natural or cultural integrity of a park, or is identified as a goal in a park's General Management Plan or other relevant NPS planning documents (NPS 2006d, sec. 1.4.5).

Incidence: Rate of occurrence, e.g., of a disease within a population.

Incineration: to burn or reduce to ashes; cremate.

Initial reduction phase: The period (primarily the first five years of plan implementation) during which it is expected that management activities would reduce and stabilize the park elk population at target goals.

Intraspecific: Interactions between individuals of the same species.

Maintenance phase: The period after initial reduction efforts during which less intensive maintenance activities would be conducted in order to maintain the park elk population at target goals.

No action alternative: The alternative describes current conditions and is required to be included for analysis under NEPA (sec. 1500.1(a)). This analysis provides a benchmark by which comparisons of environmental effects of the action alternatives can be made.

Non-work/wage income: Income from such sources as retirement income, dividends, interest, and rent.

Objectives: Specific statements of purpose related to a plan/EIS. Objectives must be met to a large degree for the plan to be successful.

Ovariectomy: Breaking of an animal's ovaries in order to halt normal hormone production normal breeding behavior.

Preferred alternative: The alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors.

Prevalence: Proportion, e.g., of a population affected by a disease.

Prion: An infectious protein that lacks nucleic acids. These abnormal forms of prions resists degradation. According to the protein only hypothesis, prions are the cause of CWD and other transmissible spongiform encephalopathies.

Recruitment: Addition to a population through birth or immigration.

Riparian: The area along a river or stream that is influenced by the increased availability of water.

Rut: The breeding season and behavior of ungulates.

Skilled volunteers: Individuals identified through an NPS-developed system which have a demonstrated level of firearm proficiency established by the NPS. Other skilled volunteers would need to demonstrate appropriate proficiency depending on their proposed involvement. Those skilled volunteers that qualify for participation would become part of a pool of available personnel that may supplement elk management teams.

Soundscape: The natural ambient sound level—that is, the environment of sound that exists in the absence of human-caused noise. Effects of proposals should be measured and evaluated against this baseline.

Special status species: Special status species include: 1) species federally listed as threatened or endangered under the Endangered Species Act of 1973, as amended (ESA); 2) species that are proposed or are candidates for listing under the ESA; 3) State of South Dakota listed species; and species considered rare or unique, but not officially listed.

Surgical sterilization: Surgical procedures designed to render an animal sterile (e.g., tubal ligation, ovariectomy).

Take: Under the Endangered Species Act (1973), "take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" affecting species protected under the Act. This may include significant habitat modification or degradation if it kills or injures wildlife by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering.

Targeted Surveillance: Current Wind Cave National Park elk management-related efforts involving identification of animals exhibiting clinical signs of CWD, their removal (typically by gunshot), removal of CWD test sample for analysis, and disposal of carcass.

Translocation: Elk population management technique used in the past involving the live trapping and relocation of animals to areas outside the park. This options was precluded when CWD was identified within the park and translocation of elk in such areas was prohibited by the NPS.

Transmissible spongiform encephalopathies (TSE): The family of diseases that are presumably caused by abnormal prion proteins; include CWD.

Tubal ligation: a method of permanent sterilization for women, involving the surgical sealing of the fallopian tubes to prevent the ovum from passing from the ovary to the uterus.

Ungulate: Belonging to a group of hoofed mammals including the odd toed perissodactyls (including horses) and even-toed artiodactyls (including elk, deer and pronghorn antelope).

Withdrawal period: The period of time after drug treatment when the treated animal should not be used for food, and during which animals are not to be slaughtered. This allows time to the animals to eliminate the drug residues.

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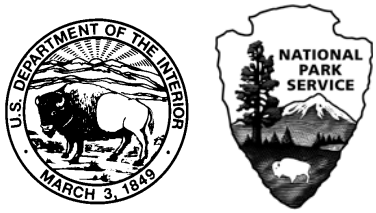

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historic places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

October 2009

United States Department of the Interior • National Park Service