Montana Fish, Wildlife & Parks

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To All Interested Parties:

This final environmental impact statement was prepared by Montana Fish, Wildlife & Parks (FWP) and is available for public review. The Final EIS describes five alternative approaches to the future of wolf conservation and management in Montana. One alternative describes a continuation of the existing federal program, three alternatives describe a program in which FWP would assume management responsibility upon the wolf's removal from the endangered species list, and one alternative describes a program in which FWP would assume some management responsibility should delisting be delayed. The Final EIS presents the expected environmental consequences of each of the five alternative actions.

FWP released a Draft EIS for review and public comment on March 12, 2003. A total of 5,500 comments were received during the comment period, which ended May 12, 2003. The public was offered the opportunity to provide oral comments at 14 community work sessions held in Billings, Glasgow, Avon, Missoula, Bozeman, Gardiner, Butte, Dillon, Ennis, Great Falls, Kalispell, Whitefish, Rexford and Thompson Falls during the months of March, April and May. The public was also offered the opportunity to provide written comments by returning pre-printed postcards, writing a letter, or sending an E-mail through the FWP website.

As a result of the comments received from the pubic, the Montana Wolf Management Advisory Council, and the FWP Commission, corrections and clarifications to the draft, as well as some new information, are incorporated into this Final EIS. Those changes are reflected in the body of the document. A representative sample of written letters and oral comments offered by the public, as well as FWP's responses, are presented in Appendix 5.

Following distribution of this Final EIS, FWP will decide which of the five alternatives to adopt. FWP recommends selection of Alternative 2, Updated Council, with the changes contained in the Final EIS. The alternative ultimately selected will become Montana's Final Gray Wolf Conservation and Management Plan. I can make this decision no sooner than 15 days after releasing the Final EIS to the public.

Additional information, or a copy of the Final EIS, may be obtained via the Internet at www.fwp.state.mt.us, or by writing to Wildlife Division, Montana FWP, P.O. Box 200701, Helena, MT 59620-0701.

Sincerely,

M. Jeff Hagener
Director

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: PROJECT OVERVIEW AND SUMMARY

Introduction

Gray wolves (*Canis lupus*) are thriving and expanding in number and distribution in Montana. This is because of natural emigration from Canada and a successful federal effort that reintroduced wolves into Yellowstone National Park (YNP) and the wilderness areas of central Idaho. There are probably more wild wolves in Montana now than at any time in the past 70 years. Since 1974, the U.S. Fish and Wildlife Service (USFWS) has managed wolves in Montana, under the authority of the Endangered Species Act (ESA). The biological recovery goal for the northern Rockies wolf population is a total of 30 or more breeding pairs for three years in the states of Montana, Idaho, and Wyoming, with breeding pair being defined as a male and a female that raised at least two pups to December 31. The biological requirements for recovery were met at the end of 2002.

But before USFWS will propose to delist, federal managers must be confident that a secure, viable population of gray wolves will persist if the protections of the ESA are removed. To provide that assurance, Montana, Idaho, and Wyoming must develop conservation and management plans and adopt other regulatory mechanisms in state law. Upon review and approval of the state plans, USFWS will propose to delist the gray wolf. Upon delisting, management authority for wolves will return to the state governments where wolves reside.

Purpose and Need for the Proposed Action

USFWS has managed wolves in Montana as either "endangered" or as "experimental, nonessential" under the authority of ESA. In March 2003 USFWS downlisted wolves in the Northwest Montana Recovery Area as "threatened." Montana Fish, Wildlife & Parks (FWP) proposes to prepare and adopt a wolf conservation and management plan so that management authority can be transferred to the State of Montana because the biological recovery goal has been met. If Idaho, Wyoming and Montana do not develop and adopt conservation and management plans, which in combination must assure the long-term security of wolves in the northern Rockies, USFWS will not delist the gray wolf. In that case, wolves in Montana will continue to be managed by the federal government.

USFWS anticipates the delisting process could begin in 2003 or 2004, if wolf management plans are completed by the three states and pass independent scientific peer review. The State of Montana would adopt a wolf conservation and management plan prior to USFWS's proposal to delist wolves, but the plan would not be implemented until USFWS officially transfers legal authority to the state. Under Montana statute, FWP is the agency charged with conservation and management of resident wildlife.

FWP recognizes the gray wolf as a native species and is committed to recovery of the species within Montana. The purpose of the plan is to manage wolves consistent with Montana's own state laws, policies, rules, and regulations. FWP intends to implement positive conservation and management strategies to make sure that all federal requirements are met, recovery is complete, and that wolves are integrated as a valuable part of Montana's wildlife heritage.

FWP also recognizes that the long-term future of wolves in Montana depends on carefully balancing the complex biological, social, economic, and political aspects of wolf management. FWP will consider the wide spectrum of interests in designing and implementing a flexible program that is responsive and addresses the challenges faced by people directly affected by wolves.

Benefits of the Proposed Action

Managing gray wolves as a resident native species according to state guidelines will allow the program to meet the goal of positively conserving and managing wolves while adapting to the needs and interests of Montana's citizens and visitors. Montana would meet its legal requirement to maintain a secure population of wolves in the northern Rockies, in conjunction with Idaho and Wyoming, by developing and a adopting a program to conserve and manage the species. Managing gray wolves will not be easy, but wolf restoration is fundamentally consistent with Montana's history of wildlife conservation. FWP believes that it is in Montana's best interest to recognize and take on the challenges, responsibilities, and benefits of a restored wolf population.

Decisions to be Made

FWP is using the Montana Environmental Policy Act (MEPA) as a tool to decide if the state will adopt and implement a wolf conservation and management plan and therefore assume management responsibility. The process of preparing an Environmental Impact Statement (EIS) requires FWP to decide how wolves will be managed if it assumes responsibility. One alternative suggests that FWP neither prepares nor adopts a plan. Other alternatives suggest that FWP develops a plan and go on to describe conservation and management activities that would be implemented under each alternative. The alternatives describe a spectrum of philosophies, strategies, and tools from which FWP will ultimately determine a course of action.

If FWP selects an alternative in which FWP would adopt and implement a plan thereby assuming responsibility upon delisting, that alternative will then become FWP's management plan. That plan will address wolf conservation and management anywhere wolves occur in Montana, except where management authority is otherwise explicitly reserved to other jurisdictions, such as Montana's Indian tribes. Ultimately, the outcome of this EIS process will result in a management and conservation plan which would be implemented through the combined decisions and actions of the FWP Commission, the seven FWP administrative regional offices, FWP's headquarters in Helena, the Montana Department of Livestock (MDOL), USDA Wildlife Services (WS), local law enforcement or county authorities, and other cooperators.

Other Agencies that have Jurisdiction or Responsibility

At present, USFWS and WS are responsible for wolf recovery and management activities. Federal laws, rules and regulations provide guidance. When wolves are delisted and management authority is transferred to the State of Montana, state laws become the primary regulatory and legal mechanisms guiding management. Two titles within Montana statutes describe the legal status and management framework for wolves. Title 87 pertains to fish and wildlife species and oversight by FWP. Title 81 pertains to the MDOL and its responsibilities related to predator control. Montana statutes assign joint responsibility to FWP and MDOL for managing wildlife that causes property damage to livestock. Through a cooperative agreement with MDOL, WS conducts field investigations and management activities in cases of property damage caused by wildlife such as mountain lions, bears, coyotes, and now potentially gray wolves.

Outfitters in Montana are under the jurisdiction of the Montana Board of Outfitters and the Montana Department of Labor and Industry, which is responsible for issuing outfitting licenses and the enforcement of laws regulating the outfitting industry. Outfitters using federal lands are also overseen by the respective federal land management agencies.

The U.S. Forest Service (USFS), the National Park Service (NPS), the Bureau of Land Management, USFWS, or other federal jurisdictions administer federally owned lands. These agencies manage these lands according to their enabling legislation, agency mission, and relevant federal laws, rules, and regulations. FWP coordinates with federal agencies on wildlife and habitat issues of mutual interest, but has no legal jurisdiction over how those lands are managed. Both the USFWS and state agencies have authorities and responsibilities for wildlife management on national wildlife refuges. NPS has jurisdiction for wildlife within national parks.

Montana's Indian tribes have jurisdictional authority for wildlife conservation and management programs within reservation boundaries. FWP coordinates with tribal authorities on issues of mutual interest.

Public Involvement Process

Although wolves have been documented and may have bred in Montana intermittently, recovery in the sense of a sustained breeding population in Montana actually began about 17 years ago when a pair of Rocky Mountain gray wolves denned in Glacier National Park. Then, in 1995 and 1996, a total of 66 wolves from southwestern Canada were reintroduced to Yellowstone National Park and central Idaho.

Montana's effort to take over this endangered species upon its recovery began in 1994 when FWP solicited public comments on the agency taking a more active role during the recovery phase. That effort resulted in the 1995 draft Wolf Recovery and Management Plan. That plan was not implemented, primarily because of uncertainties about funding and agency responsibilities. Then, five years later, the effort hit full stride when Gov. Marc Racicot convened Montana's Wolf Management Advisory Council.

The 12-member Wolf Management Advisory Council—a mix of livestock producers, hunters, educators, outfitters, conservationists, and other citizens—worked for seven months to develop 26 "Guiding Principles" organized in four broad subject areas that address the public interest, public safety, maintaining wildlife populations and protecting the livestock industry. An Interagency Technical Committee advised the council, providing scientifically based information about biological, technical, legal, or financial aspects of wolf conservation and management. The Technical Committee also helped the council identify and assess challenges associated with implementing overall management strategies or specific management actions. It was comprised of wolf experts and resource managers from NPS, USFWS, USFS, WS, and FWP.

The council delivered its report and recommendations to Gov. Racicot, and then governor-elect Judy Martz, in early 2001. Based on its public deliberations, the council reported that the State of Montana could contribute to wolf recovery in the northern Rockies. Furthermore, the council reported that, once recovered, wolves can coexist within Montana's complex biological, social, economic, and political landscape and that it is appropriate for FWP to develop a management program.

More specifically, the advisory council recommended that Montana:

- maintain wolf populations at levels that will prevent reclassification as "threatened" or "endangered" under federal law.
- encourage wolves to inhabit large, contiguous public-land areas where the potential for conflict is lowest.
- integrate wolf and wildlife management to maintain traditional hunting heritage and wildlife viewing opportunities.
- incorporate public outreach and encourage Native American cooperation.
- share funding among state, federal, and private entities.

- act upon threatening wolf-human encounters consistent with black bear and mountain lion management guidelines.

- enhance deer and elk populations to support wolf populations, maintain recreational and viewing opportunities, and reduce the potential for livestock depredation.
- use hunting and trapping to manage increasing wolf numbers in a manner that will sustain wolf populations and preclude reclassification under federal law.
- recognize that tolerance for wolves on private property is fundamental to wolf population recovery and range expansion.
- compensate livestock owners for losses at fair market value but do not use FWP funds to compensate depredation losses.
- provide incentives to livestock producers who use best management practices to decrease wolf/livestock conflicts.
- allow livestock owners to address wolf depredation problems on private lands as wolf numbers increase.
- use wolf numbers to address the management of wolf depredations on livestock. When wolf numbers are low, more conservative methods should be applied; more aggressive control methods should be applied as wolf numbers increase.

At the end of 2000, FWP officials characterized the advisory council's report as the first step toward acquiring wolf management responsibilities from the federal government. The group's work was aimed directly at helping to determine how to balance wolf numbers with the deer and elk they prey upon, address conflicts with livestock operations, ensure human safety, and how Montana's wolf management responsibilities should be funded.

With the advisory council's report in hand, Gov. Judy Martz directed FWP to use it to frame a wolf management plan. In response, FWP released the "Montana Wolf Conservation and Management Planning Document" in January 2002 (Appendix 1). While the 117-page planning document reflected what a state wolf management plan could resemble if it were based on the council's work and recommendations, FWP still needed to hear from others and explore various alternatives before adopting a management plan in full compliance with the legal requirements of MEPA.

In January 2002, FWP mailed about 1,000 post cards announcing: (1) the completion of the Montana Wolf Conservation and Management Planning Document; and (2) that an environmental review process was set to begin. Many more announcements were sent via E-mail, while other citizens were alerted through FWP news releases and by visiting FWP's website www.fwp.state.mt.us.

Using this document as a basis for discussion, FWP opened the "scoping" comment period for its wolf management EIS on Feb. 25, 2002 by asking the public to identify issues and concerns about a state-sponsored wolf management program. The public was invited to provide oral comments to FWP directly at a series of community work sessions held throughout the state in March-April 2002. In addition, FWP invited the public to submit comments in writing or electronically.

Media coverage of the community work sessions, and the public's other opportunities to comment, was extensive. More than 800 people participated by attending a work session, and thousands wrote comments or sent emails, representing nearly every Montana county. In addition, comments came from 49 states, including the District of Columbia and Puerto Rico; and eight foreign countries, including Australia, Canada, Denmark, Germany, Israel, Mexico and the United Kingdom. Although MEPA requires at least 30 days for an EIS "scoping" period, FWP designed a 60-day process to ensure that the public had adequate time to consider this important issue. The first public comment phase of Montana's process to

develop and adopt a wolf management plan closed April 30, 2002. In all, FWP collected nearly 4,000 comments and written correspondences. Because many of the written letters and E-mails identified more than one issue or concern, FWP recorded nearly 6,700 individual statements.

Because wolf recovery and the potential for the state to regain management authority are issues of such great significance to Montana, Governor Martz reappointed the original Wolf Management Advisory Council in January 2003. Its charge is to assist FWP through the final stages of state planning efforts and completion of this EIS. The Council and the FWP Commission reviewed a summary of the public comments gathered during the 2002 scoping effort and the subsequent Draft EIS prepared by FWP in response. In it, FWP analyzed five alternatives that reflected the spectrum of comments. One of the alternatives was largely based on the work of the Wolf Management Advisory Council, and FWP identified it as the preferred alternative. Postcards were again mailed to announce the availability of the Draft EIS. FWP released the Draft EIS to the public and also made it available on the FWP website in mid-March 2003.

FWP designed another 60-day comment period to accept comments on the Draft EIS, running from March 12 through May 12, 2003. FWP hosted 14 Community Work Sessions across Montana to accept oral comments (same locations as 2002 plus two new locations), the last of which was May 1. FWP also provided opportunities for the public to comment electronically via the FWP website, in addition to written letters via postal mail or fax. During this comment period, FWP asked the public to provide more specific feedback by identifying which alternative/s best addressed their concerns about the future of wolf conservation and management in Montana and why. FWP also asked the public to identify what, if anything, they would modify about the alternative so that it better addressed their concerns. FWP prepared these questions on pre-printed post cards and had them available at all the community work sessions, in addition to all FWP Regional Headquarters offices. The FWP website also offered an identical format with the same two questions. The public was not required to answer the questions literally, but could provide any comment as desired.

About 500 people attended the community work sessions in 2003. Work session participants were able to learn more about the issues and alternatives during an open house immediately prior to the comment session and during opening remarks by FWP in which the alternatives were described and attendees could follow along and take notes on a handout. A total of 1,595 comments were recorded during the 2003 work sessions. Because of the high volume of emails received during the 2002 scoping comment period, FWP contracted with an independent provider for the receipt and data storage of all emails received through the FWP website. The raw data file was transferred to FWP for all processing at the close of the comment period. FWP received about 5,500 comments on the Draft EIS.

No significant new issues or omissions were identified during the second public comment period. Therefore, no new alternatives were created and analyzed in the final EIS. FWP presents the Updated Council Alternative as its preferred alternative in the final EIS. The final EIS (FEIS) includes a summary of the major conclusions and supporting information from the draft EIS and the agency's responses to substantive public comments received on the draft. The final EIS also discloses the agency's recommendation, or proposed decision, with an explanation of the reasons. FWP will also prepare a Record of Decision (ROD), sometimes called a decision document, which is a concise public notice that announces the decision, explains the reasons for the decision, and explains any special conditions surrounding the decision or its implementation. The ROD could be a separate document from the final EIS. Ultimately, the ROD and the final EIS will comprise Montana's official plan to manage a fully recovered endangered species – a plan that was largely crafted by the public.

Issues and Alternatives Identified through Public Involvement and Evaluated in the Draft and Final EIS

The Montana Wolf Management Advisory Council identified roughly 30 issues during its deliberations in 2000. During the 2002 scoping process, FWP asked Montanans to identify issues in a similar manner. Comments received during the public scoping period (community work sessions, written letters and postcards, and E-mail correspondence) were entered into a computer database for systematic analysis. There was a significant degree of overlap between the council's list and the list of issues generated by the public. In fact, many public comments supported the work of the council and agreed with its recommendations.

Through the analysis, broad themes emerged. They encompassed issues, questions, and concerns about wolf management, wolf numbers, wolf distribution, state and federal administration, predator and prey relationships, program funding and various considerations for human health and safety, livestock, wildlife habitat, land management, and more. With a full spectrum of comments associated with each issue, FWP often received conflicting public comments. For instance, some comments directly opposed one another and are thus irreconcilable. Nonetheless, opposing points of view are incorporated into the alternatives analyzed. The fundamental issues of wolf conservation and management, associated social factors, state and federal administrative responsibilities, prey populations and their management, and concerns about livestock and compensation for wolf-caused losses were significant enough to drive the creation of specific alternatives. The lack of strongly conflicting public comments on issues like human safety, the need for information outreach and education, or wolf population monitoring for example, allowed FWP to address several issues in different ways within the spectrum of alternatives created based on the major issues.

The intent of a scoping period is for the agency to gather information from the public. Thus, the community work sessions were not designed to answer questions or to provide specific information on what would be in Montana's plan. Nonetheless, many questions emerged which can also be a measure of public concerns and issues. A separate summary, which FWP will use to address specific needs and target future public outreach efforts, captures the questions raised during the scoping period. While some questions can be answered directly, others are rhetorical, beyond the scope of the EIS, or beyond the jurisdiction of FWP. Many questions, however, can only be answered through the development of this EIS and the final decision.

Similar themes emerged during the 2003 comment period on the Draft EIS as during the 2002 scoping comment period. Because FWP asked for feedback specifically about the alternatives, comments were more complicated and detailed. In addition, comments often referenced more than one alternative and many different issues. However, many comments were general and did not specifically mention any alternative. Therefore, FWP analyzed the 2003 comments in the same general issue categories as the 2002 comments. FWP also analyzed the 2003 comments specifically mentioning an alternative within their own respective categories.

The following is a comprehensive list of alternatives and issues addressed in the draft and final EIS. See Table 1.

Alternative 1, No Action. This alternative is the most conservative and "protectionist" of the alternatives. Most comments indicate that it is premature to delist wolves and that there still aren't enough wolves in enough places – or that USFWS isn't done recovering wolves. Many reference an unfavorable political climate in Montana. Furthermore, many comments indicate a lack of trust in FWP management or confidence in FWP's experience or ability to manage wolves. A smaller number of

comments support this alternative because it "saddles" the USFWS with the "burden" of managing wolves over the long term. There are also comments that indicate a lack of support for this alternative. These comments do not want USFWS involved with wolf recovery and management in Montana any longer and would prefer FWP authority. Some indicate that wolves are recovered and that it is time delist the species.

Alternative 2, Updated Council. This alternative, which is largely based on the work of the Advisory Council, is FWP's preferred alternative. It generated the greatest number of comments of all the alternatives. Overall this alternative is supported across a diversity of interests and geography in Montana. Many perceive it as balanced and fair. Many comments indicate a preference for a different alternative, but do express a willingness to accept this alternative. Many comments state that this alternative should be modified. Increasing the number of breeding pairs, establishing a "zone", or securing 100% federal funding are mentioned most frequently. Other comments suggesting modification address specific management tools within the alternative. Some comments oppose this alternative and mention support for one of the others either because of the difference in management program or because they do not support FWP assuming management responsibility.

Alternative 3, Additional Wolf. This alternative is similar to the Alternative 2, the Updated Council Alternative except the breeding pair trigger increases from 15 to 20, and no compensation program would be created through FWP's leadership. Some comments support the higher number of breeding pairs while other comments oppose the higher number. Closely related comments would support implementation of Alternative 2 but with an increased number of breeding pairs. Some comments also encourage modification to include a compensation program. Other comments suggest changing specific management tools.

Alternative 4, Minimum Wolf. This alternative would "cap" wolf numbers and "zone" wolf distribution through aggressive management to prevent wolf colonization east of the Rocky Mountain Front. Some comments support this alternative while others opposed it. Many comments support the significant federal funding component. Suggested modifications include increasing the number of wolves, incorporating an adaptive framework, and adding a compensation program.

Alternative 5, Contingency. This alternative calls for FWP to begin managing wolves through an agreement with USFWS prior to USFWS completing the delisting process. FWP developed and analyzed the impacts of this alternative because it received many comments expressing concerns about delays. Many comments specific to this alternative support some type of FWP involvement prior to delisting, although they are relatively few in number compared to the other alternatives. Many comments mentioning Alternative 2 also mentioned this alternative. Some comments specifically state an opposition to FWP involvement under this alternative because of a lack of trust in state elected, appointed, or agency officials. These comments overlap with comments on Alternative 1 (No Action). Still other comments oppose this alternative because it may inadvertently decrease the incentive for USFWS to achieve full delisting and transfer authority to Montana or because FWP would still be constrained by federal rules. Potential modifications to Alternative 5 are similar to suggested changes for Alternative 2.

NONE of the Alternatives. Some comments indicate a lack of support for any of the alternatives. Such comments are generally followed by a preference for a management approach that is outside the sideboards of the federal recovery criteria (declaring wolf as predator, starting a bounty system, or "no wolf"). Some comments indicate support for the "Wyoming" approach of dual legal classification. Other comments state a preference for USFWS to take a more conservative approach to the existing federal program. A few comments suggest a customized collection of management tools or approaches that combine elements of several alternatives.

Wolf Management, Numbers, Distribution, and Conservation Strategies. These public comments describe many different philosophies, tools, and strategies for how wolves could be managed; comments also address how many wolves would be in the Montana population and where they will be distributed. Wolves were managed as a bounty animal up until about 70 years ago when they were thought to be extinct in Montana. Wolves in Montana became protected as an endangered species in the early 1970s.

Social Factors: These comments reflect the differing philosophical, value-based opinions, and the human dimensions surrounding wolves, wolf management, prey populations, etc. The social, cultural, and aesthetic values people assign to the gray wolf today grow out of a long, colorful history of interactions between wolves and people. Public opinions about wolves vary greatly. A successful conservation and management program for wolves ultimately depends on people and their attitudes. The social factors that shape public interest in or tolerance for wolf presence and how conflicts are resolved are equally important components of any wolf management program.

Administration and Delisting. These comments address state and federal responsibilities, the current legal status of wolves, their recovery, the federal and state delisting processes and the progress of planning efforts in Idaho and Wyoming. While the restoration of wolves in Montana occurred through the combination of natural wolf recolonization and reintroduction, the population in the tri-state area has attained the biological benchmarks of species recovery. The question at hand is how a recovered wolf population will be managed and by what agency or jurisdiction. Many comments also identified concerns about potential delays in delisting due the lack of adequate regulatory mechanisms and/or management plans in Idaho or Wyoming or litigation, which would delay or block transfer of management authority to Montana.

Prey Populations. These comments address wolf-prey interactions, potential impacts of wolf predation on Montana big game populations, how wolves and ungulates will be managed, how other predators and other wildlife will be managed, and Montana's hunting heritage. Because of their long-term financial investments and willingness to restrict themselves when necessary, Montanans enjoy relatively liberal hunting seasons for more ungulate species than other western states. The financial investments and sacrifices made by the hunting public to restore ungulate populations are significant.

Funding. These comments address wolf management costs, sources of funding, and the reliability of funding in the future. FWP has actively restored, perpetuated, and managed the fish and wildlife resources of the state using the fees generated through the sale of hunting and fishing licenses and matching federal monies. As there was disagreement about the recovery of the gray wolf, a long-absent native species, there are also different opinions about how future wolf conservation and management activities should be funded.

Livestock. These comments address Montana's livestock industry, its importance and responsibilities, and what actions government officials and private citizens would take when wolves kill livestock. Wolves can cause problems for some livestock producers. Financial losses may result directly from wolf depredation. Indirect costs may accumulate because of increased management activities, changes in husbandry practices, or unconfirmed losses. These financial hardships accrue to individual farmers and ranchers and may be significant to them.

Wolf Habitat, Habitat Connectivity, and Land Management. These comments address the need for wolves to move freely through Montana, within the tri-state area, and across the international border and question how and where this will be accomplished. During the recovery phase, connectivity of the wolf population in the northern Rockies with the Canadian population was assured through federal legal protections, adequate prey populations, and the network of public lands--all of which facilitate dispersal and maintenance of genetic viability, an important underpinning of recovery and long-term security of a

recovered population. Montana is an important link between Yellowstone, Idaho, and Canadian sub-populations. Interagency coordination and monitoring programs must assure that regional connectivity is maintained through adequate dispersal. Comments also address whether or not there is a need for motorized travel restrictions or localized area closures where wolf packs establish den or rendezvous sites.

Compensation. These comments address payments to livestock producers and others who experience wolf depredation losses; comments also address the source and reliability of the funding and how a compensation program would be administered. Wolf population recovery has and will continue to result in the loss of personal property or income to some individuals due to wolf activity and depredation.

Economics/Livelihoods. These comments address the economic costs and benefits of having wolves in Montana, livelihoods, ecotourism, and fiscal impacts to FWP.

Information, Education, and Public Outreach. These comments address the need for FWP to develop information and education techniques and programs to keep Montanans informed about wolf conservation, wolf management, and human safety. Comments also address the need for technical assistance for landowners and other rural residents. The long-term status of gray wolf populations will be determined by human attitudes toward wolves.

Human Safety. These comments identify Montanans' concerns about the safety of their children, pets, and their livestock in the presence of a recovered wolf population. Generally, wolves fear people and do not pose a significant threat to human safety. However, individual wolves may gradually lose their fear of people and begin associating or interacting with people and/or loitering near buildings, livestock, or domestic dogs. While this behavior is unusual for a wild wolf, it is more typical of a released captive wolf or wolf-dog hybrid. Habituation of wild wolves has been identified as a contributing factor in aggressive wolf-human encounters (McNay 2002b).

Monitoring. These comments address how and at what intensity wildlife managers will monitor wolf populations, pack sizes, pack locations, locations of individual wolves, and the status of prey populations. During the first five years after delisting, FWP must document that the Montana sub-population of wolves is secure and that the combined total of wolves in Montana, Idaho, and Wyoming exceeds the delisting threshold.

Other Wildlife. These comments address wolf interactions with other, non-ungulate wildlife species (e.g. ESA-listed species, other carnivores). Wolves could function as "keystone species" which exist at relatively low abundance, whose effect on the ecosystem is relatively large and involves multiple trophic levels (Power et al. 1996, Estes 1996). A wide variety of scavengers and other carnivores benefit from the year-round availability of carrion. Wolves may directly or indirectly compete for food with other carnivores by selecting similar prey or by usurping kills (Kunkel et al. 1999). Some non-ungulate species, such as the beaver, are also prey items for the gray wolf in Montana.

Private Property. These comments address "private property rights", referring to wolf presence on private property, protection of private property, etc. Some comments assert a landowner's "right" to allow wolves on his or her property, while others assert a landowner's "right" to control or manage wolves on his or her property. While wildlife are publicly owned resources and managed in trust for this and future generations of Montanans, perpetuation of Montana's wildlife also depends on the habitats found on private lands.

Hybrids. These comments identify a concern about whether captive wolves or wolf-dog hybrids jeopardize human safety if they are released or escape from their owners, erode public tolerance for wild

wolves if someone has an encounter with an escapee, whether hybrids or captive wolves pose a risk to a recovered wolf population, and whether stricter laws need to be passed to further regulate or ban ownership. Wolf-dog hybrids have been responsible for human attacks, maulings, dismemberments, and deaths.

Wildlife Management Areas. These comments address wolf presence on FWP Wildlife Management Areas (WMAs). FWP manages a network of WMAs across the state to benefit wildlife, particularly wintering ungulates in western Montana. These purchases were made with revenues generated through sales of hunting and fishing licenses and matching federal funds. They are also used for outdoor recreational pursuits other than hunting, such as bird watching, wildlife viewing, fishing, or camping.

Table 1. The main issues identified through two public comment opportunities (scoping in 2002 and the Draft EIS in 2003) and their frequency.

Main Issues	Number of Comments 2002	Number of Comments 2003
Alternative 1 (No Action)		103
Alternative 2 (Updated Council)		408
Alternative 3 (Additional Wolf)		171
Alternative 4 (Minimum Wolf)		227
Alternative 5 (Contingency)		82
None of the Alternatives		112
Wolf Management, Numbers, and Distribution	1203, 611, & 193 respectively; 2,011 total	864, 512, & 178 respectively; 1,554 total
Social Factors	803	431
Administration and Delisting	623	456
Prey Populations	501	307
Funding	447	431
Livestock	414	308
Wolf Habitat, Connectivity, and Land Management	388	60
Questions	368	
Compensation	287	345
Economics / Livelihoods	227	167
Information / Education and Public Outreach	208	57
Human Safety	162	43
Monitoring	151	122
Other Wildlife Species	80	22
Private Property	77	14
Hybrids	22	6
Wildlife Management Areas	13	2

Issues not Evaluated in the Final EIS

FWP received a number of comments both in 2002 and 2003 identifying issues or concerns that are beyond the sideboards of the federal wolf recovery program, beyond the statutory authority of the State of Montana, not relevant to the decisions being made, or otherwise outside the scope of the proposed action. These issues, and the rationale for their exclusion, are described below.

1. *Comments about the federal effort to reintroduce wolves into Yellowstone National Park and central Idaho.*

   Some comments questioned the wisdom, legality, or methods by which wolves were reintroduced to these areas. This was a federal effort directed and funded by the U.S. Congress to hasten the overall pace of wolf recovery in the northern Rockies under the Northern Rocky Mountain Wolf Recovery Plan. Federal actions were ultimately carried out and found to be legal and in compliance with the authority and scope of USFWS and ESA provisions. All legal challenges have been exhausted. Because wolves will remain in the Greater Yellowstone and central Idaho recovery areas, these comments were not analyzed further.

2. *Comments calling for the removal of all wolves from the State of Montana, Yellowstone National Park, and central Idaho. Related comments suggested that wolves should not be permitted to enter Montana from Yellowstone National Park.*

   These issues were not considered further because they are outside the sideboards established by the Northern Rocky Mountain Wolf Recovery Plan, which calls for a viable, secure wolf population in the northern Rockies, encompassing the states of Montana, Idaho, and Wyoming. This EIS addresses future conservation management of a recovered population, not whether wolf recovery and/or wolf presence should be allowed in Montana or not. Wolves have been reported intermittently in Montana for a long time and have been continuously present in northwestern Montana since the early 1980s.

3. *Comments suggesting that the gray wolf should be classified as a "predator" under Montana law and managed as a bounty-animal.*

   This issue was not analyzed further because the "predator" classification under Montana law does not meet the standard of an adequate regulatory mechanism that ensures a viable, secure wolf population in the future. Wolves would not be delisted if assigned this legal classification under Montana statute. Furthermore, the 2001 Montana Legislature determined that upon removal from federal and state endangered species lists, wolves would be classified as a species "in need of management" in Montana statute. The FWP Commission could reclassify the gray wolf as a game animal or furbearer in the future when legal harvest, as a management tool, is determined to be biologically sustainable.

4. *Comments suggesting changes in state or federal highway design and construction, changes to federal land management practices, grazing management, travel management strategies, road densities, area closures, use of motorized vehicles, creation of more wilderness areas, etc.*

   These issues were not analyzed in significant detail because FWP does not have statutory authority over federal land management practices, decisions, or policies. However, FWP already does engage federal land managers during informal consultations to meet shared management objectives and assure habitat integrity for wildlife. Biologists with the Montana Department of Transportation are involved with minimizing impacts to the environment through the design, permitting, and wetland mitigation efforts for highways in Montana. Because habitat fragmentation, particularly for wide-

ranging carnivores, is an important issue across a bigger geographic scale, the USFS appointed a national coordinator for wildlife/transportation issues who is located at the USFS Regional Office in Missoula. FWP personnel participate at the technical level, but FWP is not the lead agency for these efforts.

5. *Comments suggesting that delisting the gray wolf in the northern Rockies is premature because the population had not reached the biological recovery criteria. Related comments indicated that the wolf population would continue to warrant the protections of ESA even after reaching the biological recovery goals because of concerns about how western states would manage the population.*

   The decision to delist the gray wolf in the northern Rockies rests with USFWS, under the authority granted by the U.S. Congress. USFWS will also determine the adequacy of the regulatory mechanisms and the conservation plans of Montana, Idaho, and Wyoming to assure that the gray wolf would not need to be relisted in the future. These decisions are not within the statutory authority of the State of Montana. Nonetheless, this EIS will outline the philosophies, management strategies and tools by which Montana proposes to manage a delisted wolf population and maintain its contribution to the northern Rockies population. Upon completion of state planning efforts, USFWS will seek independent scientific peer review to determine the adequacy of the state plans to maintain the recovered population.

6. *Comments addressing the USFWS proposal to reclassify the gray wolf and adopt new regulations, as published in the Federal Register July 2000 or the 2003 final decision by USFWS to create a Western Distinct Population Segment, downlist the Northwestern Montana Recovery Area from endangered to threatened, and adopt new regulations for wolf management in northwest Montana.*

   USFWS is the agency responsible for determining the classification of species protected by the federal ESA. The reclassification proposal published in the Federal Register in July 2000 and the April 2003 decision pertain to the classification of the gray wolf while the species is still listed and recovery efforts are ongoing. The proposal and final decision are not directly relevant to the future conservation and management of a recovered, delisted wolf population in Montana.

7. *Comments addressing ESA, the need to modify it, or the scope of federal authority to recover species; other comments questioned why there was not a public "vote" about recovering wolves in Montana.*

   USFWS is responsible for planning and implementing recovery of rare and imperiled species, with cooperative participation by the state wildlife agencies. Actual species recovery proceeds according to provisions of ESA as they are implemented by USFWS and by species recovery plans, not by popular vote. USFWS is legally required to provide opportunities for public comment on its proposed actions and welcomes that public participation. Amending ESA is beyond the scope of this EIS.

8. *Comments suggesting that the real issue was "people management." Wolves should be allowed to increase in number and distribution and that human presence or uses of the landscape should be subordinated to wolf use.*

   This issue was not considered in further detail because FWP recognizes people as an important part of the wolf conservation equation. FWP seeks to integrate a wolf conservation and management program within an existing complex environment of people, other wildlife, landownership patterns, land uses, etc. -- thereby balancing the needs of wolves and people.

9. *Comments concerning commercial outfitting on federal public lands and the difficulty in changing "use days" or the areas where an outfitter is allowed to go, as wolves become established in new areas.*

   The regulation of commercial uses of federal public lands is carried out by the respective federal land management agency. FWP does not have any statutory authority in these matters. FWP provides opportunities and welcomes input from outfitters, federal land managers, and the general public on hunting season regulations and other programs related to big game management and ungulate population abundance.

10. *Comments expressing concern about the potential for legal challenges to either state or federal actions related to the delisting of the gray wolf in the northern Rockies or the implementation of Montana's program.*

    Interstate coordination is ongoing among Montana, Idaho, and Wyoming officials, with the common goal of a timely, efficient, and successful delisting of the gray wolf in the northern Rockies. In an advisory capacity, USFWS works closely with the states to ensure that each state meets the legal and scientific standards to ensure a smooth and timely transition. FWP is aware of the potential for legal challenges to either the federal proposal to delist, the preparation or adequacy of this EIS under Montana law, implementation of Montana's program or even specific elements of the program. The risk of potential litigation does not out weigh the benefits and responsibility of preparing to assume management authority upon delisting. This EIS is a necessary step to regain management authority, regardless of the potential for litigation in the future.

FWP's Recommendation, Summary of Major Conclusions, and Supporting Information

Even though MEPA provides state agencies the latitude to adopt a draft EIS as the final EIS, FWP decided against it. Because of the complexity, scope and degree of controversy surrounding wolf restoration and management, FWP wanted to take the time for one last thorough evaluation of the preferred alternative, a final review of all the public comments, and to reconsider the substantive issues. In preparing this Final EIS, FWP still adopts by reference the Draft EIS and all the supporting information contained in the Draft EIS. However, FWP is also updating the Final EIS with new information obtained since circulation of the draft and explaining why it recommends the preferred alternative.

FWP's Recommendation

Through the work of the Montana Wolf Management Advisory Council, and subsequent public comment opportunities, many issues were identified, including: wolf management, wolf numbers, wolf distribution, social factors, administration and delisting, prey populations, funding, livestock wolf habitat, compensation for livestock losses, economics and livelihood considerations, public outreach, human safety, wolf monitoring, and others. FWP prepared and analyzed the potential impacts of five different alternatives, including the preferred alternative. Based on the work of the council, the public comments, and the impacts analysis, FWP concludes that the preferred alternative is the best option to meet Montana's legal requirement to maintain a recovered wolf population, assure that the ecological needs of wolves are met, to resolve conflicts swiftly and effectively, and to address public concerns. This alternative is the best overall approach to balance the benefits of wolf restoration with the costs and to minimize the impacts on those most directly affected by wolves.

FWP has made slight modifications to the preferred alternative in the Final EIS. These changes either correct an error in the Draft EIS, clarify a point of confusion, or provide additional detail and discussion in response to public comment on the Draft EIS. One exception is that FWP has updated the budget for the preferred alternative presented in Chapter 4 of the Final EIS. While some new information has become available and is discussed below, FWP did not make any substantive changes in the preferred alternative in the Final EIS.

Summary of the Major Conclusions and Supporting Information from the Draft EIS

In selecting the preferred alternative, FWP concluded that it should accept management responsibility for wolves upon delisting and conserve and manage wolves in such a way as to maintain a recovered population that will not require subsequent emergency relisting under ESA. A wide spectrum of the public appears to agree with that conclusion and supports the Updated Council Alternative. FWP concludes that an adaptive management approach based on 15 breeding pairs will provide a spectrum of management tools -- from simple harassment techniques to chase wolves away to lethal control measures such as offering kill permits to landowners to remove problem wolves and regulated hunting or trapping --will sustain the wolf population and allow wolves to find their place on the landscape. Additionally, the adaptive framework will provide FWP with the flexibility to adjust management to wolf numbers, wolf distribution, public acceptance, prevailing landownership patterns, land uses, prey populations, and other considerations. The public outreach effort will be a critical aspect of the program. FWP will need to coordinate management and monitoring activities with other jurisdictions (e.g. states, government agencies, universities, Indian tribes, etc.) Also, FWP will need to acquire supplemental funding to implement the program.

FWP's conclusions are supported by announcements from the USFWS that the wolf population has achieved biological recovery and is ready to be delisted. The population in the northern Rockies, and Montana specifically, has increased in number and distribution since the reintroduction efforts. In preparing the preferred alternative, FWP consulted with wolf experts and those currently managing wolves in the northern Rockies, reviewed the management programs developed by other states and the published literature, and sought guidance from the Wolf Management Advisory Council and the general public.

New Information Obtained since Circulation of the Draft EIS

Since FWP released the Draft EIS, USFWS reclassified the gray wolf from "endangered" to "threatened" in the Northwest Montana Recovery Area. The "experimental, non-essential" designation in the rest of Montana did not change. The downlisting was accompanied by a new set of rules and guidelines for USFWS to use in resolving conflicts. It provides greater management flexibility for agencies and private landowners to resolve conflicts on private land and offers agencies additional tools to help address wolf-livestock conflicts on public lands. This change in legal classification under ESA does not have any relevance to the preferred alternative that outlines state management of a completely delisted population. The change, however, does have relevance to the Contingency Alternative which would have FWP manage wolves as "threatened" in the Northwest Montana Federal Recovery Area and "experimental, non-essential" throughout the rest of Montana under these newly adopted federal rules. At the same time as the reclassification final rule, USFWS established the Western Distinct Population Segment which encompasses the states of California, Idaho, Montana, Nevada, Oregon, Washington, Wyoming, a portion

of Utah, and a portion of Colorado. The reclassification to threatened applies to wolves found throughout the Western Distinct Population Segment that are not encompassed already in the experimental areas of the Greater Yellowstone and central Idaho experimental recovery areas. Lastly, USFWS also announced its intention to conduct rulemaking to remove the entire Western Distinct Population Segment from protection of ESA. This notice also included the experimental, non-essential populations in the Greater Yellowstone and central Idaho recovery areas which would delist at the same time as the entire Western Distinct Population Segment. This is the first administrative step in the delisting process, signaling USFWS's intent to move forward with delisting as soon as state plans and regulatory mechanisms are finalized by Montana, Idaho, and Wyoming. The reader is referred to USFWS (2003a and 2003b) for additional information on these federal actions.

The 2003 Montana Legislature passed several new statutes that have potential relevance to wolf conservation and management in Montana leading up to and upon delisting.

- House Bill 283 directs the Montana attorney general to analyze the state's options related to delisting and, in cooperation with FWP, to prepare a proactive legal opinion for possible litigation scenarios regarding recovery of damages and costs incurred by the State of Montana that are associated with wolf reintroduction. The Attorney General's Office and FWP have discussed the legislation.

- House Bill 306 is an act submitting to the electors of Montana, at the November 2004 election, an amendment to the Montana Constitution recognizing and preserving the heritage of Montana citizen's opportunity to harvest wild fish and wild game animals. FWP does not foresee any conflict if the electorate passes this proposed Constitutional amendment. In fact, if it does pass, and if Montana's wolf population increased to the point where population regulation through hunting and trapping became appropriate, these activities would be incorporated into that heritage as well.

- Senate Bill 209 requires FWP to publish an annual game count, estimating to the department's best ability the numbers of each species of game animal in the hunting districts and administrative regions of the state. Under the preferred alternative, FWP proposes to have an active public outreach component in the overall management program, including annual reports, making information available through FWP's website, giving presentations to interested groups, and providing information in a variety of other ways.

- House Bill 262 describes legislative intent concerning FWP management of large predators. FWP and the FWP Commission must interpret HB262 within the context of other specific legal obligations and statutes that FWP must comply with, including the conservation and management of wildlife in such a manner that prevents the need for listing (MCA 87-1-201, MCA 87-5-107). State law also guides the FWP Commission (MCA 87-1-301). FWP believes that once it has met its legal requirements to maintain the recovered population and the population is secure, then it and the FWP Commission will be able to exercise some discretion while implementing wolf management through the adaptive framework of the preferred alternative. FWP does not believe the preferred alternative conflicts with HB262 because the preferred alternative describes a proactive approach to integrating the management of predator and prey populations to maintain traditional hunting heritage and wildlife viewing in Montana. The preferred alternative also contains specific provisions for agency personnel and private citizens to protect themselves if threatened and their domestic dogs if attacked and for citizens to protect their private property if a wolf is attacking, killing, or threatening to kill livestock, according to legislation (SB163) already passed by the 2001 Montana Legislature. These three primary goals identified in HB262 are also

guiding principles underlying the preferred alternative which can be traced back to the work of the Montana Wolf Management Advisory Council and their *Report to the Governor* submitted in December 2000.

- House Joint Resolution 32 is a non-binding joint resolution requesting that the Governor, the Montana Congressional Delegation, and the US Secretary of the Interior seek the immediate delisting of the gray wolf. USFWS, the Governor, and FWP all agree that the gray wolf population in the northern Rockies has recovered and can be delisted. HJ32 urges the Governor and FWP to seek federal funding for wolf management. The federal government has provided funding through the State Wildlife Grants program and through USFWS to help Montana prepare for wolf management. The Governor and FWP continue to work with officials in Idaho and Wyoming and the tri-state Congressional delegation to secure adequate, long-term funding. HJ32 also urged FWP to adopt a certain definition of "breeding pair" that, in part, would have FWP determine whether or not a pack counts as a breeding pair when pups are six months of age. The definition suggested by HJ32 in one respect is more conservative than the federal recovery definition, which when implemented, has allowed for the replacement of alpha animals if one of the biological parents of the litter is killed and another adult (male or female, respectively) is present or joins the pack and the pack is capable of breeding the following year. USFWS has documented this and counted the pack as a successful breeding pair. In addition, it is difficult to count and classify wolves without adequate snow cover using either aerial or ground tracking methods. FWP's preferred alternative outlines a definition that is consistent with the federal recovery definition. ESA requires USFWS to oversee state management for at least five years to assure that the wolf population does not decrease to the point of requiring ESA protection once again. FWP and the Wolf Council believe that monitoring and counting breeding pairs according to the federal definition will be useful for data comparisons and important to document. HJ32 also called for the federal government to abandon authority over wolves in Montana upon delisting. Indeed, upon delisting the authority and responsibility for wolf management falls upon the State of Montana and FWP. USFWS will maintain some oversight, primarily through interagency administrative coordination, as required by ESA, for at least five years. Even during that oversight period, state laws guide state officials. Lastly HJ32 urges the Montana Attorney General to join into any lawsuit filed in opposition to federal delisting. While this direction pertains to the Attorney General's Office more directly than FWP, FWP is already working with other western state fish and wildlife agencies and other states' legal councils in anticipation of litigation.

FWP believes the preferred alternative provides the context to properly address these recent legislative actions and all other state laws and administrative rules. The direction established by the preferred alternative is the most consistent of all the alternatives. In it, FWP will meet its legal requirements to maintain a secure, recovered population, comply with state laws and Commission policy, integrate the wolf within Montana's wildlife heritage, while at the same addressing the potential negative impacts to those most directly affected by wolves.

CHAPTER 2: AFFECTED ENVIRONMENT

This chapter describes the existing conditions with respect to the issues identified during scoping. It provides a foundation, or baseline, by which to compare the consequences that could occur from implementing any of the management philosophies, strategies, or tools contained within each of the alternatives described in Chapter 3. This chapter focuses on the resources that are most relevant to the issues raised by the public and the alternatives designed to address them.

A Review of the Gray Wolf in Montana

History

The gray wolf was extirpated from the western United States during the 1900s, primarily due to loss of habitat and conflicts with people. In 1884, the first statewide bounty law was passed in Montana. That first year, 5,450 wolf hides were presented for payment. All but three Montana counties reported a bounty payment for wolves from 1900-1931 (Riley 1998). Wolves as a self-sustaining breeding population were probably extinct in Montana by the 1930s. Tracks, scat, and/or observations of large canid-like animals (individuals and occasionally a pair) were either reported or killed up until the 1970s (Curnow 1969, Singer 1975, Singer 1979, Flath 1979, Day 1981, Ream and Mattson 1982). Most are thought to have been dispersers from Canada and little to no successful breeding activity was evidenced or sustained consistently through time since the 1930s. It is also possible that wolf-hybrids were being reported. Wolves were not legally protected in the U.S. until 1974. At that time, they were classified as "endangered" in all of the lower 48 states except Minnesota, where the gray wolf was classified as "threatened."

In 1980, the Northern Rocky Mountain Wolf Recovery Team completed a plan, which would guide wolf recovery efforts for a future wolf population in the northern Rockies. The plan designated three recovery areas -- Northwestern Montana, Central Idaho, and the Greater Yellowstone Area (GYA)--each of which included some portion of Montana (Figure 1).

In 1986, the first wolf den in over 50 years was documented within GNP. Since then, new packs have established throughout western Montana due to dispersers from Canada and the GNP area. To hasten recovery in the other two areas, USFWS reintroduced a total of 66 wolves from Alberta and British Columbia into central Idaho and YNP in 1995 and 1996.

Current Population Status and Distribution

Gray wolves are thriving and expanding in number and distribution in Montana, Idaho, and Wyoming (Figures 1 and 2). Within Montana alone at the end of 2002, there were approximately 183 wolves in about 34 packs distributed primarily in western Montana (Figures 3 and 4). While wolves are still found primarily in northwestern Montana and in the GYA, new packs are establishing along the Montana/Idaho border, in south central Montana, and outside the northeastern corner of YNP. There have been occasional reports in the Crazy, Highwood and Snowy mountains, but no breeding pack has been confirmed. The wolf population in the northern Rockies met the biological recovery levels at the end of 2002.

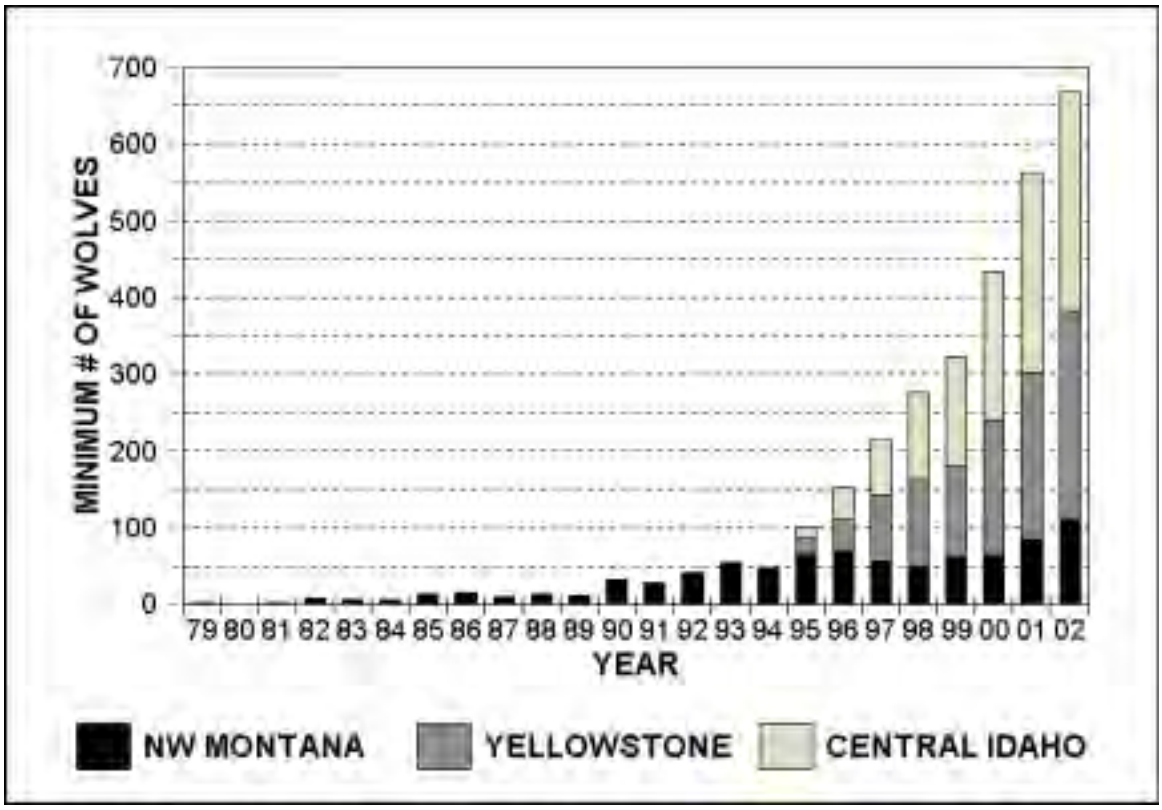

Figure 2. Grey wolf population trends in the Northwestern Montana, Greater Yellowstone, and Central Idaho recovery areas from 1979-2002. (Source: USFWS et al. 2002, and USFWS unpubl. data as of February 2003).

Ecology

Physical Characteristics. Male gray wolves in Montana weigh 90-110 pounds, and females weigh 80-90 pounds. About half of the wolves in Montana are black and the remainder gray. Both color phases may be found in a pack or in one litter of pups. Tracks are normally 4.5 to 5.5 inches long (Harris and Ream 1983).

Wolves may resemble coyotes, particularly when wolves are young. Wolves may also be confused with some large domestic dog breeds. Wolves are distinguished from dogs by their longer legs, larger feet, wider head and snout, narrow body, and straight tail. Other distinguishing characteristics require closer examination than is possible in field settings with live animals. In many instances, actual behavior must be used to distinguish wild wolves from wolf-dog hybrids and domestic dogs (Boyd et al. 2001, Duman 2001).

Pack Size. The highly social gray wolf lives in packs. Packs are formed when male and female wolves develop a pair bond, breed and produce pups. The pack typically consists of a socially dominant breeding pair (alphas), their offspring from the previous year, and new pups. Other breeding-aged adults may be present, but they may or may not be related to the others. Cooperatively, the pack hunts, feeds, travels, and rests together. The pack also shares pup-rearing responsibilities, including hunting and tending pups at the den or at a series of rendezvous sites. Pack size is highly variable, ranging from as few as three to as many as 37 (USFWS et al. 2001).

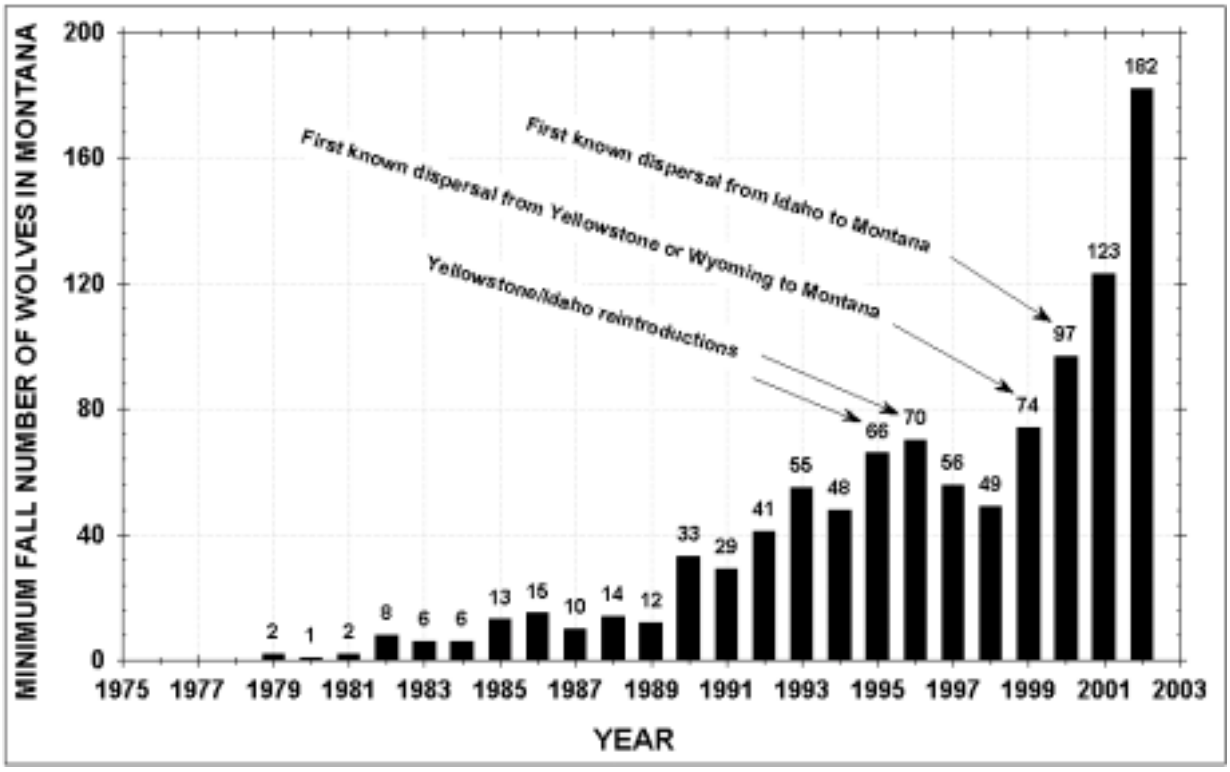

Figure 4. Minimum fall number of wolves in the State of Montana, 1979-2002, and the first known dispersal events leading to a new pack in the Montana population (USFWS unpubl. data). The arrows show the years of the first known dispersals of radio-collared animals into the State of Montana to start a new pack or join an existing pack.

Reproduction. Wolves normally do not breed until at least 22 months of age (Mech 1970). Breeding usually occurs only between the dominant male and female in a pack. In the northern Rockies, the breeding season peaks in mid- to late February (Boyd et al. 1993). Wolves localize their movements around a den site and whelp in late April, following a 63-day gestation period. After the pups are about eight weeks old, they are moved to a series of rendezvous sites. In northwestern Montana, maximum litter size averaged 5.3 (range 1-9) from 1982 to the mid 1990s. By December, average litter size declined to 4.5 (Pletscher et al.1997).

Pup survival is highly variable and influenced by several factors, including disease, predation, and nutrition (Mech and Goyal 1993, Johnson et al. 1994). In northwestern Montana from 1982-1995, 85% of pups survived until December, though survival varied year to year (Pletscher et al. 1997). Pup mortality in the first eight months of life was attributed to human causes (8 of 20 mortalities, 40%), unknown causes (2 of 20, 15%), and disappearance (9 of 20, 45%). In YNP, during the first four years, 133 pups were born in 29 litters and 71% were believed to still be alive in 1998 (Bangs et al. 1998). Pup survival varied between 73-81% from 1996-1998. However, canine parvovirus was strongly suspected as a contributing factor in the low pup survival (45%) in 1999. In 2000, pup survival rebounded to 77% (Smith et al. 2000).

Occasionally, more than one female in a pack may breed, resulting in more than one litter per pack (Ballard et al. 1987). This phenomenon has been documented in YNP (Smith et al. 2000, USFWS et al. 2000, USFWS et al. 2001).

Food Habits. The gray wolf is an opportunistic carnivore and is keenly adapted to hunt large prey species such as deer, elk, and moose. Wolves may prey on smaller species, scavenge carrion or even eat vegetation. In Montana, white-tailed deer, mule deer, elk and moose make up the majority of wolf diets. Ungulate species compose different proportions of wolf diets, depending on the relative abundance and distribution of available prey within the territory. In northwestern Montana, white-tailed deer comprised 83% of wolf kills, whereas elk and moose comprised 14% and 3%, respectively (Kunkel et al. 1999). However, 87% of wolf kills in YNP during 1999 were elk (Smith et al. 2000).

Wolves also scavenge opportunistically on vehicle- or train-killed ungulates, winterkill, and on kills made by other carnivores, particularly mountain lions. Wolves may also kill and feed upon domestic livestock such as cattle, sheep, llamas, horses, or goats. They may also kill domestic dogs but usually do not feed on the carcass.

Movements and Territories. A pack establishes an annual home range or territory and defends it from trespassing wolves. From late April until September, pack activity is centered at or near the den or rendezvous sites, as adults hunt and bring food back to the pups. One or more rendezvous sites are used after pups emerge from the den. These sites are in meadows or forest openings near the den, but sometimes are several miles away. Adults will carry small pups to a rendezvous site. Pups travel and hunt with the pack by September. The pack hunts throughout its territory until the following spring.

Pack territory boundaries and sizes may vary from year to year. Similarly, a wolf pack may travel in its territory differently from one year to the next because of changes in prey availability or distribution, conflict with neighboring packs, or the establishment of a new neighboring pack. Because the attributes of each pack's territory are so unique (elevations, land use, land ownership patterns, prey species present and relative abundance, etc.), it is difficult to generalize about wolf territories and movements.

After recolonizing the GNP area in the 1980s, individual wolves dispersed and established new packs and territories elsewhere in western Montana. Wolves demonstrated a greater tolerance of human presence and disturbance than previously thought characteristic of the species. It was previously believed that higher elevation public lands would comprise the primary occupied habitats (Fritts et al.1994). While some packs have established territories in backcountry areas, most preferred lower elevations and gentle terrain where prey is more abundant, particularly in winter (Boyd-Heger 1997). In some settings, geography dictates that wolf packs use or travel through private lands and co-exist in close proximity with people and livestock. Since the first pack established a territory outside the GNP area in the early 1990s, packs in northwestern Montana negotiated a wide spectrum of property ownerships and land uses. These colonizers also settled across an array of rural development.

With the exception of GNP packs, wolves in northwestern Montana move through a complex matrix of public, private, and corporate-owned lands. (The same is true of newly established packs in other areas of Montana.) Land uses range from dispersed outdoor recreation, timber production, or livestock grazing to home sites within the rural-wildland interface, hobby farming/livestock, or full-scale resort developments with golf courses. Landowner acceptance of wolf presence, and the use of private lands, is highly variable in space and time. Given the mobility of the species and the extent to which these lands are intermingled, it would not be unusual for a wolf to traverse each of these ownerships in a single day. Private land may offer habitat features or concentrations of wintering ungulates that are especially attractive to wolves so the pack may utilize those lands disproportionately more than other parts of their territory. Certain land uses may increase the risk of wolf conflict with humans or livestock.
The earliest colonizing wolves had large territories. Ream et al. (1991) reported an average of 460 square miles (mi^2). In recent years, average territory size decreased, probably as new territories filled in suitable, unoccupied habitat. In the Northwestern Montana Recovery Area during 1999, the average territory size

was 185 mi^2 (8 packs). Individual territories were highly variable in size, with a range of 24-614 mi^2 (USFWS et al. 2000).

Territories in the GYA were larger, averaging 344 mi^2 (11 packs). Individual pack territories ranged from 33 to 934 mi^2. Central Idaho wolf packs had the largest average territory size of 360 mi^2 (13 packs), with individual pack territories ranging from 141 – 703 mi^2 (USFWS et al. 2000).

Dispersal. When wolves reach sexual maturity, some remain with their natal pack while others leave, looking for a mate to start a new pack of their own. These individual wolves are called "dispersers." Dispersal may be to nearby unoccupied habitat near their natal pack's territory or it may entail traveling several hundred miles before locating vacant habitat, a mate, or joining another pack. It appears that dispersing wolves utilize scent-marking behavior and howling to locate other wolves, and frequently use similar travel paths used by previous dispersers. In this regard, habitats occupied by wolves sometime in the past will likely be occupied by wolves in the future, as long as the prey base remains adequate.

Boyd and Pletscher (1999) indicated that the dispersers in their study moved toward areas with higher wolf densities than found in their natal areas – in this case north toward Canada. This has important implications for Montana wolves because there are now resident wolf packs to the south and west in central Idaho and YNP. Dispersal has already resulted in the formation of several new packs in Montana between those core populations (Fig. 2) (Boyd et al. 1995, USFWS et al. 2001). Wolves will probably continue dispersing from the core areas and slowly occupy landscapes between the Canadian border, central Idaho and northwestern Wyoming (USFWS et al. 2000). Ultimately, this will yield a larger regional population, capable of genetic exchange across the international border and northern Rocky Mountains (Forbes and Boyd 1996, 1997).

Boyd and Pletscher (1999) studied wolf recovery in northwestern Montana from 1979 to 1997. Male wolves dispersed at an average age of 28.7 months and traveled an average of 70 mi from their natal territory before establishing a new territory or joining an existing pack. Females averaged 38.4 months old at dispersal and traveled an average of 48 mi. Males and females, combined, traveled an average of 60 mi (range 10 –158 mi). There were two peaks of dispersal: January-February (courtship and breeding season) and May-June.

Increasingly, dispersal is being documented among and between all three recovery areas in the northern Rockies (Bangs et al. 1998, Mack and Laudon 1998, Smith et al. 2000). Combined, there were 21 known dispersal events in 2000 and 19 in 1999 (USFWS et al. 2000). Dispersal paths crossed international boundaries, state boundaries, public and private land boundaries, different land uses, and agency jurisdictions.

Mortality. Wolves die from a variety of causes, usually classified as either natural or human-caused. Naturally caused mortalities result from territorial conflicts between packs, injuries while hunting prey, old age, disease, starvation, or accidents. In an established Alaskan wolf population largely protected from human-caused mortality, most wolves were killed by other wolves–usually from neighboring packs (Mech et al. 1998). However, in the northern Rockies, natural mortality probably does not regulate populations (USFWS 2000). Humans are the largest cause of wolf mortality and the only cause that can significantly affect populations at recovery levels (USFWS 2000). Human-caused mortality includes control actions to resolve conflicts, legal and illegal killings, as well as car/train collisions.

Genetics. In recent years, the application of genetic techniques to the study of wildlife populations has permitted managers to address issues of genetic diversity and population viability with increased confidence. These techniques have yielded information relevant to wolf conservation and management in the northern Rockies. Wolf recovery in the northern Rockies advanced from the combination of

recolonization of northwestern Montana by relatively few wolves from Canada and the reintroduction of wolves into YNP and central Idaho. In northwestern Montana, the founding population was small enough that inbreeding among closely related individuals was possible. Fortunately, the genetic variation among the first colonizers was high (Forbes and Boyd 1996). The combination of high genetic variation among colonizers and ongoing natural dispersal to and from Canadian populations was adequate to assure long-term population viability, provided that genetic exchange continued.

Similar inbreeding concerns existed for the relatively small founding population reintroduced to YNP and central Idaho. But wolves were trapped from two distinct source populations in Canada. The genetic variation among reintroduced wolves (and the source populations from which they came) was also high (Forbes and Boyd 1997). Overall, genetic diversity was similar among samples of natural recolonizers, reintroduced individuals, and the Canadian source populations. Field studies of wolf dispersal and migration distances supported the genetic results (Ream et al. 1991, Boyd et al. 1995, Boyd and Pletscher 1999). Wolf populations in the northern Rockies should not suffer from inbreeding depression.

An underlying tenant of the federal wolf recovery and restoration program is that each state's wolf population is functionally connected so that genetic material can be exchanged among the wolves in the three recovery areas and Canadian wolves. In isolation, none of the three populations could maintain its genetic viability (USFWS 1994a, Fritts and Carbyn 1995).

Population Growth. Wolf populations increase or decrease through the combination and interaction of wolf densities and prey densities (Keith 1983, Fuller 1989). Actual rates of change depend on whether the wolf population is pioneering vacant habitat (as in YNP and central Idaho), whether the population is well established (as in northwestern Montana), and food availability. The degree and type of legal protection, agency control actions, and regulated harvest also influence population trends. Once established, wolf populations apparently can withstand human-caused mortality rates up to about 30% of the fall population (Keith 1983, Fuller 1989).

If protected, low density wolf populations can increase rapidly if prey is abundant. Keith (1983) speculated that a 30% annual increase could be the maximum rate of increase for any wild wolf population. Once densities were high enough, social interactions probably intensify. Conflict and increased competition for food eventually cause a wolf population to level off or decline (Keith 1983, Fuller 1989).

Wolf populations in the GNP area (northwestern Montana and southeastern Alberta) increased an average of 23% annually from 1986-1993 (Fritts et al. 1995). After 1993, the population leveled off (Pletscher et al.1997). Those packs produced dispersers that eventually colonized vacant habitats in western Montana (USFWS unpubl. data). Some packs which formed in the Northwestern Montana Recovery Area since the early 1990s persisted, but others did not. Packs have been lost due to illegal killing by humans, agency control actions where livestock depredation was chronic, and for other unknown reasons.

The average annual rate of increase from 1992 to 2000 in northwestern Montana was 4.7% (USFWS et al. 2001). In 1992, the minimum mid-winter count (including pups) was 41 wolves. Sixty-two wolves were counted in 2000. The highest count was 70 wolves, at the end of 1996. The population grew in some years, but declined in others. Some of the variation probably reflects true changes in wolf numbers, but some variation may be due to decreased monitoring.

Prey populations influenced recent wolf population dynamics in northwestern Montana. White-tailed deer populations expanded from the late 1970s through the mid 1990s, in part precipitating and sustaining increases in wolf numbers and distribution. However, the winter of 1996/97 was exceptionally severe, and white-tailed deer populations declined significantly (Sime, unpubl. data). Other prey populations also

declined and poor recruitment was attributed to winterkill. USFWS believes that the significant decline in natural prey availability led to the record high number of livestock depredations and subsequent lethal control. Wolf depredations on livestock in 1997 alone accounted for 50% of all depredations in northwestern Montana between 1987 and 1999. Smaller prey populations likely translated to decreased wolf pup survival in 1997 and 1998, compared to 1996. Ungulate populations rebounded in recent years and the wolf population is also nearing its 1996 level.

Newly reintroduced wolves in the GYA and central Idaho exceeded all expectations for reproduction and survival (Bangs et al. 1998). Populations became established in both areas within two years, rather than the predicted three to five years. Pup production and survival in the GYA has been high. The average annual growth rate for the GYA from 1996-2000 is 35%, based on the minimum count as of December 31 and including pups (USFWS et al. 2001). However, population growth in the GYA slowed in 1999 after the rapid increase in the first three years post-reintroduction (Smith et al. 2000).

It is likely that population growth rates will slow for both the core Yellowstone and central Idaho populations because of declining availability of suitable, vacant habitat. However, these populations will be a source of founders for new packs outside the YNP and central Idaho recovery areas and within the state boundaries of Montana, Idaho, and Wyoming. Therefore, wolf numbers and distribution outside core areas are expected to increase rapidly in the next few years.

Pack membership typifies the predominant manner in which a wolf exists in the wild. The pack is the mechanism by which wolves reproduce and populations grow. However, in most wolf populations, some lone, nomadic individuals exist as dispersers -- looking for vacant habitat, waiting to be found by a member of the opposite sex within a new home range, or searching for an existing pack to join. Up to 10-15% of a wolf population may be comprised of lone animals.

This is a temporary transition. Wolves in northwestern Montana usually found other wolves in an average of 66 days (range 2-202 days) (Boyd and Pletscher 1999). Occasionally, lone wolves get into conflict with people and/or livestock, ultimately being lost to the population through legal or illegal means. For a wolf to make a contribution to the population, it must affiliate with other wolves. Until they affiliate with a pack, lone wolves are generally counted separately or omitted from total population counts altogether because they do not contribute to population growth and are difficult to detect by routine monitoring activities.

Interactions with Other Species. The relationships between carnivores and other species, and the ecosystems in which they live, could be the most poorly understood and controversial dimension of carnivore ecology (Estes 1996). The real question is not whether carnivores play important, unique roles in the natural functioning of ecosystems, but rather how they go about it, to what degree, and at what scale (Mech 1996).

Some researchers believe wolves could function as a “keystone species,” which exists at relatively low abundance, whose effect on its community or ecosystem is relatively large and involves multiple levels on the food chain (Power et al. 1996, Estes 1996). Despite volumes of published literature on gray wolves, however, there is remarkably limited evidence of the precise nature, degree, and mechanisms by which wolves affect ecosystems.

Wolves kill ungulates, but the effects on ungulate populations are varied. Scavenging species, such as coyotes, common ravens, and wolverines feed on wolf kills. A wide variety of scavengers and other carnivores benefit from carrion being readily available year round, rather than just a pulse in the early spring because of winterkill (Stahler et al. 2001). Wolves may directly or indirectly compete for food with other carnivores (e.g. mountain lion) by selecting similar prey, or by usurping kills (Kunkel et al.

1999, Arjo et al. 2002). Wolves have even been observed harassing grizzly bears in an attempt to take over ungulate carcasses (D. Boyd pers. comm.). Wolves sometimes kill other carnivores, such as mountain lions, coyotes, or grizzly bear cubs (White and Boyd 1989, Boyd and Neale 1992, Arjo 1998, Crabtree and Sheldon 1999, Arjo and Pletscher 1999). Biologists in the GYE have noted social interactions and occasional conflicts between gray wolves and grizzly bears over ungulate carcasses.

Social and Cultural Values

The social, cultural, and aesthetic values people assign to the gray wolf today grow out of a long and colorful history of interactions between wolves and humans. Public opinions about wolves vary greatly. Therefore, a range of alternatives was developed in this EIS to reflect that spectrum.

Early Native American Indians shared the landscape with the gray wolf. The wolf attained a cultural significance to many Indian tribes in Montana. In the days of European settlement and for decades thereafter, wolves were viewed unfavorably because they killed livestock during a period of dramatic declines in native prey populations and continue to do so sporadically today. Wolves were also perceived as a negative, controlling influence on prey populations. However, public opinion about predators and wolves, in particular, evolved through the 1960s and 1970s. For some in society, the gray wolf became a symbol for conservation of wildlife, the environment, and public lands.

Yet, there have been dramatic changes in the landscape since wolves roamed across Montana at the turn of the 20th century. Human settlement, the introduction of livestock and agriculture, and the current abundance and distribution of native ungulates make for a dramatically different landscape for wolves in the 21st century. In part because of these changes, some Montana citizens and organizations spoke out against wolf recovery and restoration efforts in the GYA and central Idaho, as well as against the legal protections afforded wolves by ESA in more general terms (USFWS 1994b). Concerns were expressed about the consequences of wolf depredations on livestock and the associated economic losses, potential loss of flexibility for federal land management agencies, land-use restrictions, impacts to big game populations, and reduced hunting opportunity. Indeed, FWP shared some of those concerns.

When discussing social and cultural implications associated with wolves, the primary affected environment is the values of people living in the presence of a recovered wolf population. A simplification about what drives the differences in attitudes towards wolves might be summed up in a few words: the perceived chance of personal benefit or loss resulting from the presence of wolves. Those who perceive they will benefit (either directly or vicariously) tend to favor wolf presence, and those who perceive a threat of personal loss oppose presence. These differences in values, attitudes, and opinions are clearly reflected in the comments FWP received from the public and account for the spectrum of input on any single issue.

Legal Status and Classification under Montana Statutes

Two Titles within Montana statutes describe the legal status and management framework for wolves. Title 87 pertains to fish and wildlife species and oversight by FWP. Title 81 pertains to MDOL and its responsibilities related to predator control. More recently, the 2001 Montana Legislature passed Senate Bill 163 (SB163), which amended several statutes in both titles. SB163 is included as an appendix in the Montana Wolf Conservation and Management Planning Document (Appendix 1).

The gray wolf remains listed as endangered under the Montana Nongame and Endangered Species Conservation Act of 1973 (87-5-101 MCA). Provisions in SB163, however, automatically remove the

gray wolf from the state endangered species list when it is removed from the federal list. Therefore, separate action to delist the gray wolf under state statute by the Montana Legislature is not required, but FWP would still need to update Administrative Rule 12.5.201, which lists state endangered species.

Once removed from the state endangered species list, the gray wolf will automatically be classified as a species "in need of management." FWP and the FWP Commission will then establish the regulatory framework to manage the species (MCA 87-5-101 to 87-5-123). "Management" is defined in MCA 87-5-102 as:

> "the collection and application of biological information for the purposes of increasing the number of individuals within species and populations of wildlife, up to the optimum carrying capacity of their habitat, and maintaining such levels. The term includes the entire range of activities that constitute a modern scientific resource program including but not limited to research, census, law enforcement, habitat improvement, and education. Also included within the term, when and where appropriate, is the periodic or total protection of species or populations as well as regulated taking."

In Montana statute, "take" means to "harass, hunt, capture, or kill or attempt to harass, hunt, capture, or kill wildlife." Thus, through the development of the EIS, FWP and the FWP Commission will establish the management parameters and regulations that limit taking, possession, transportation, exportation, processing, sale, offer for sale, or shipment of wolves. In addition, FWP and the FWP Commission would initiate the law enforcement, population monitoring, educational components, and other elements of a wolf program.

SB163 also amended Montana Statute 87-3-130, which is titled "Taking of Wildlife to Protect Persons or Livestock." This amendment becomes effective only when federal protections are removed. As amended, this statute relieves a person from criminal liability for the taking of a wolf if the wolf is "attacking, killing, or threatening to kill a person or livestock." In addition, "a person may kill or attempt to kill a wolf or mountain lion that is in the act of attacking or killing a domestic dog." The definition of livestock includes ostriches, rheas, and emus. These changes are consistent with the concept of protecting human life and private property (livestock and pets) when they are in imminent danger. Citizens must report any wolves killed or injured in defense of life/property to FWP within 72 hours and surrender the carcass, the pelt, and all wolf parts.

Most importantly, SB163 resolved an element in Montana statute that was a major impediment to establishing the federally-required regulatory mechanisms to guarantee the security and perpetuation of a recovered wolf population. SB163 deleted the gray wolf from the list of species designated as "predatory in nature" which are to be systematically controlled by MDOL (MCA 81-7-101 to 81-7-104). In other words, MDOL will not be required to exterminate wolves upon delisting. Instead, MDOL would control wolves for the protection and safeguarding of livestock, as long as the control action is consistent with a wolf management plan approved by both FWP and MDOL. MDOL and FWP would cooperatively address and resolve wolf-livestock conflicts.

FWP Administration

In the North American model of wildlife conservation, the states have almost sole authority for conservation and management of resident wildlife. The exceptions are for federal trust species (e.g. migratory birds or threatened/endangered species), reserved federal lands (e.g. national parks), and for Indian reservations, as per treaty rights where the tribes maintain wildlife management authority within

reservation boundaries. In Montana, FWP is the agency with the statutory responsibility to manage resident wildlife. FWP's Wildlife Program is coordinated at the statewide level and implemented through seven administrative regions.

The Montana Legislature authorizes staffing with the numbers of Full Time Equivalent employees (FTEs) being adopted with the state budget. Within those programs affected by the outcome of the EIS, current staff includes 97 FTEs in the Wildlife Division, 22 FTEs in the Conservation Education Division, 99 FTEs in the Enforcement Division, 39 FTEs in Field Services, and 97 FTEs in Management and Administration. Outside the Wildlife Division, staff time devoted to support and administration of the wildlife program varies annually, with an estimated 35-40% spent on wildlife related activities. Some of these duties include: enforcement of game laws, licensing and inspection of game farms, responding to game damage complaints and human/wildlife conflicts, meeting public education needs, hunter and bow hunter education, publishing the FWP magazine *Montana Outdoors*, producing educational videos, printing and distributing maps and regulations, conducting drawings for limited permits, issuing special and nonresident licenses, negotiating land acquisitions, developing terms for conservation easements, and tracking expenditures (FWP 1999).

FWP Funding

State law authorizes FWP to collect fees from hunters, trappers, and anglers (87-1-601, MCA). Most of these revenues are channeled back into management of the resources generating it. The Montana Legislature has earmarked about 20% of all license revenues for specific purposes, such as habitat protection or hunter access. The remainder of these funds is deposited into one general license account without regard to the species generating the revenue. Although license revenue could be considered as state revenue, its use is limited to funding FWP programs by law. In order to maintain FWP's eligibility to receive matching federal funding under the Federal Aid in Wildlife Restoration Act (Pittman-Robertson), the Montana Legislature agreed to use hunting license revenue only for wildlife management (87-1-708, MCA). Similarly, use of interest earned from cash balances on license revenue can only be used to fund FWP programs. About two-thirds of the total license revenue collected by FWP is derived from the sale of nonresident hunting and fishing licenses.

The Federal Aid in Wildlife Restoration Act has helped fund FWP's wildlife management programs since 1941 (Kallman 1987). In 2002, approximately 26% ($15.1 million) of FWP's total revenue was obtained from federal sources. Most of this funding is generated through excise taxes on firearms, ammunition, archery equipment, and handguns. Federal funding matches state license revenue to fund wildlife surveys, research, hunter education, and various support functions. Wildlife surveys and inventories and other approved projects typically receive 75% federal funding and 25% state funding from license revenues. Federal funding also was initially used to purchase winter range for big game. Federal law requirements also protect the state's hunting-license revenue from being diverted to uses other than those pertaining to wildlife under the assent acts passed by the Montana Legislature (87-1-708, MCA). Federal law restricts some uses of matching federal funds to exclude some activities such as law enforcement that in turn, must be funded entirely by state hunting, fishing, or trapping license revenue.

Funding sources for the wildlife program include license dollars, matching federal funding, Bonneville Power Administration mitigation trust funds, and private grants and donations. License sale revenues account for approximately 65% of the wildlife program budget. The Wildlife Division received 19% ($11.1 million) of FWP's FY 2002 total budget of $58.8 million. Conservation Education was budgeted $2.5 million, Fisheries $9.6 million, Enforcement $6.4 million, Field Services $7.3 million, and Management and Finance $11.4 (FWP 2002). Budgets are developed internally, with authority to spend funds coming from the Legislature. All budgets are reviewed by the legislative budget committee and

must be approved by both the Montana House and Senate. The FWP Commission also reviews and approves the agency's budget.

Wildlife Resources

Montana's wildlife includes more than 450 species of mammals, birds, reptiles, and amphibians. FWP has statutory responsibility to regulate harvest of 55 wildlife species that are valued for meat, fur, or as "trophies." Many of these species were almost lost in Montana as a result of unregulated exploitation prior to and during settlement in the late 19th and early 20th centuries.

Enforceable wildlife conservation began with the political and financial support from Montana's hunters and anglers early in the 20th century. Early programs emphasized restoring game animals, providing legal protections in state statute, and aggressive predator control. These actions were initiated with public and legislative support and were largely funded by the hunters, anglers, and trappers of Montana. These programs were then, and are now, sustained by a philosophy of public hunting and a funding base from participants. FWP's wildlife program has evolved along with modern scientific principles of wildlife management and is considered one of the leading programs in the nation.

Categories of Wildlife Defined in Montana Statutes

Big Game. Thirteen species of large mammals are defined by statute as game animals, or "big game" (87-2-101 MCA). These include white-tailed and mule deer, elk, moose, and caribou, pronghorn, mountain goat, bighorn sheep, and wild bison. Three species of carnivores/omnivores also are designated as game animals, including the mountain lion, black bear, and grizzly bear. Today, all the above big game species except caribou, bison, and grizzly bear are legally hunted, according to regulations approved by the FWP Commission.

Numbers and distribution of most big game species probably bear little resemblance to pre-settlement conditions. Nearly all big game species were either extirpated or severely reduced in number and distribution through market and subsistence hunting prior to and during settlement. Settlement brought agriculture, forestry, mining, and suppression of catastrophic fires and flooding, causing both subtle and profound changes to Montana's landscape. These changes favored some species and were detrimental to others. Present day populations of white-tailed deer and elk are at their highest levels recorded in recent history. Mule deer numbers fluctuated over the last 20 years, but the statewide population is still robust.

In addition to natural adjustment and recovery by some big game species, efforts to restore self-sustaining populations to all, or portions of, historical ranges have been largely successful. Such efforts included species reintroduction and the acquisition and intensive management of important habitats. In the case of the mountain lion, a change in legal status from a "predator" to a "big game animal" in the early 1970s enabled lion numbers and distribution to increase over the last 30 years. Mountain lions are now present in eastern Montana in sufficient numbers to sustain a legal harvest.

Furbearers. FWP is responsible for management of furbearers (87-2-101, MCA). State law offers protection to ten furbearing species because of the commercial value of their fur. Protection allows for maintenance of sustainable populations while allowing for harvest of prime pelts. Furbearer management has evolved since 1951 when the agency initiated intensive studies on furbearer species throughout the state.

The ten species are: marten, otter, fisher, mink, wolverine, bobcat, lynx, northern swift fox, muskrat, and beaver. Except the northern swift fox and lynx, all these species may be taken by licensed trappers according to regulations approved by the FWP Commission.

Predators. The predator designation is confusing because the term refers to both a legally defined list of animals as well as an ecologically functional group of animals. State law lists the coyote, red fox, weasel, skunk, and civet cat (spotted skunk) as predators (87-2-101, MCA). Ecologically speaking, predators generally kill other animals to secure food. Under this ecological definition, several mammals function as predators but are legally designated as furbearers: bobcat, lynx, wolverine, swift fox, otter, mink, marten and fisher. Others are legally defined as game animals (black bear, mountain lion), nongame wildlife (red fox, raccoon, badger), or threatened and endangered species (grizzly bear, black-footed ferret).

Control of legally classified predators (e.g. coyote, skunk) is assigned to MDOL and carried out by WS. However, WS also controls some game animals (bears and mountain lions) causing livestock damage under a Memorandum of Understanding (MOU) with MDOL and FWP.

Nongame Wildlife, Endangered Species, and Species of Special Concern. FWP's wildlife program has emphasized management of game and furbearer species over nongame. The Nongame and Endangered Species Conservation Act (87-5-101, MCA) expanded FWP's authority in 1973 to include nongame and endangered species. More than 85% of the bird and mammal species in Montana are classified as nongame. FWP has the authority to declare certain nongame species as being "in need of management" and to develop and adopt management plans.

The Montana Natural Heritage Program oversees an ongoing inventory of animals that are rare, threatened, endangered, or believed to be vulnerable to extirpation (Reichel 1996). FWP also maintains a current listing of wildlife species of special concern. The list includes amphibians, reptiles, birds, and mammals and appears in Appendix 2. Of these, seven species are classified as threatened or endangered by federal statute. Montana law does not include a "threatened" status, but four species are listed as endangered under state statute (Appendix 2).

Other. Other statutorily defined wildlife species are classified as Upland Game Birds (grouse, turkey, pheasant, partridge, Section 87-2-101 MCA) and Migratory Game Birds (ducks, geese, swans, doves, snipe; 87-2-101, MCA).

Wolf - Prey Relationships

Montana's recovered wolves are returning to a highly modified environment and a managed system where success, like the success of other major predators like mountain lions and even human hunters, depends on the productivity and perpetuation of deer, elk, and moose populations. As a result, a primary public concern is the effect of predators on prey populations. This EIS cannot provide a comprehensive summary of predator-prey interactions or the effects of wolf predation on ungulate populations. However, some of the scientific literature reviewed for this EIS is included as a partial bibliography in the Montana Wolf Conservation and Management Planning Document (Appendix 1).

All wildlife populations vary through time and across a diversity of habitats and are influenced by a variety of ever changing environmental factors. Published literature on predator-prey interactions is highly varied in its conclusions about the ability of predators to influence prey populations or *vice versa*. There have been nearly as many different interpretations of predator-prey interactions as there have been studies. Predators and prey interact with one another within their unique habitats, through seasonal weather patterns, among an array of species and animal densities, and within different wildlife management frameworks. Each published report, therefore, must be interpreted within the context of the

conditions prevailing at that time and cannot be extrapolated to different locations or ecological systems (National Research Council 1997).

Studies show that predation may influence prey populations through changes in recruitment of young into the adult population, adult mortality, or a combination of both (Gasaway et al. 1992, Ballard et al. 1997, National Research Council 1997, Mackie et al. 1998, Kunkel and Pletscher 1999, Ballard et al. 2001). Research also suggests that increased adult female mortality from other sources, such as hunter harvest or elevated overwinter mortality, may create conditions in which predation limits ungulate populations or slows population growth (Kunkel and Pletscher 1999). On the other hand, some biologists reported that habitat and climate influence deer populations more strongly than wolf predation (Wisconsin Department of Natural Resources 1999). And some Minnesota researchers report that wolves do not appear to impact white-tailed deer populations overall, although wolf predation may have more influence in localized areas and especially in conjunction with severe winters (Mech and Nelson 2000, Minnesota Department of Natural Resources 2001). The impact of severe winter weather is a concern in the West as well. Recent findings in YNP indicate that winter severity has a dominating influence on wolf predation patterns on elk (Mech et al. 2001).

Identifying the factors that drive changes in prey populations and predator-prey interactions is extremely difficult. More than one factor is usually involved, and factors may interact with one another to further complicate efforts to understand their importance. FWP's ungulate management attempts to balance population status, habitat condition, landowner tolerance, hunter opportunity, and an array of environmental factors known to influence populations. Ungulate populations are managed in a comprehensive, ecological way, considering the whole environment, not single factors such as wolf predation or lion predation. Documenting predation as a major limiting factor of ungulate populations requires intensive radio telemetry, manipulation of both predator and prey populations, measurement of environmental conditions, a well designed monitoring program, and a sustained long-term effort. Systems with multiple large predators, including wolves, are even more challenging. FWP's current understanding of how ungulates, wolves, other carnivores, and their physical environments interact in Montana will improve with time through monitoring and research, such as the ongoing intensive studies in southwestern Montana and YNP. Management improves as a result.

Because of their long-term financial investments and willingness to impose hunting regulations to best conserve wildlife, Montanans now enjoy relatively liberal hunting opportunity for more ungulate species than other western states. This is evident in long-term trends in hunter numbers and harvest for both elk and deer (Figures 5-8). Statewide, the number of elk hunters and elk harvest has gradually increased since the 1960s. This reflects the increasing interest in elk hunting as elk populations increased and expanded into formerly elk-free habitats. Long-term trends for deer are more volatile and reflect real changes in deer abundance and corresponding changes in hunter opportunity due to changes in hunting regulations. At the FWP regional scale and the individual hunting district level, the long term trends are more variable.

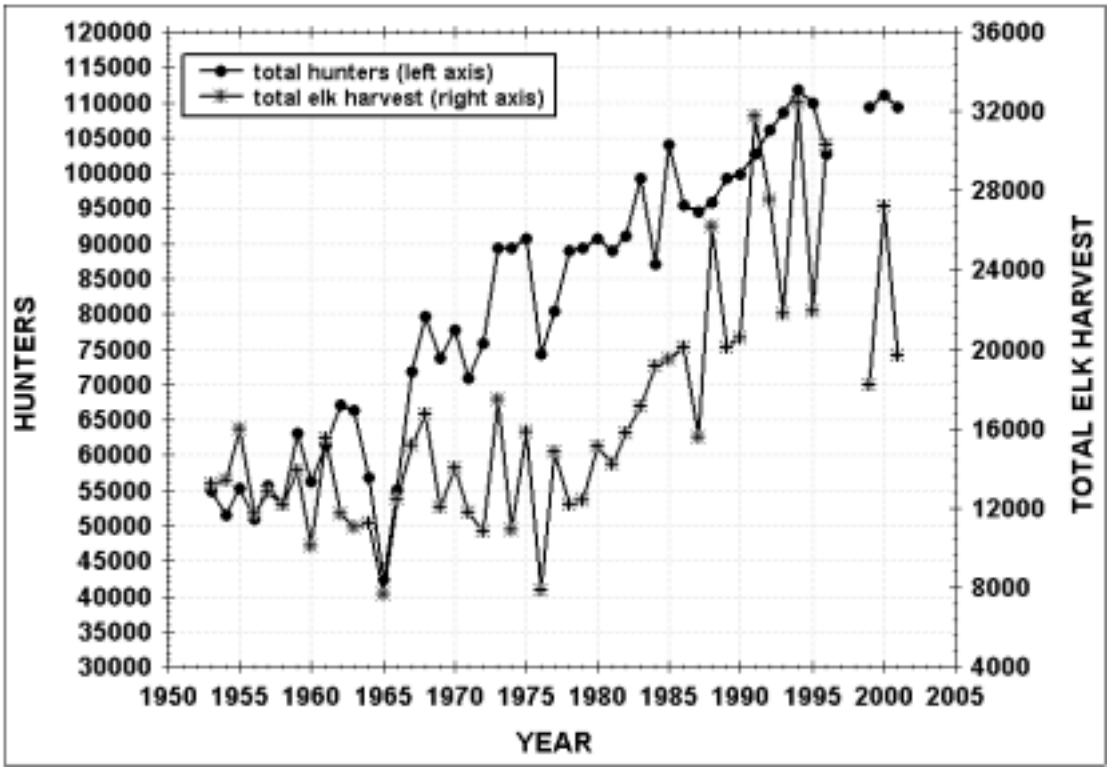

Figure 5. Total number of elk hunters and total elk harvest in Montana, 1954-2001.

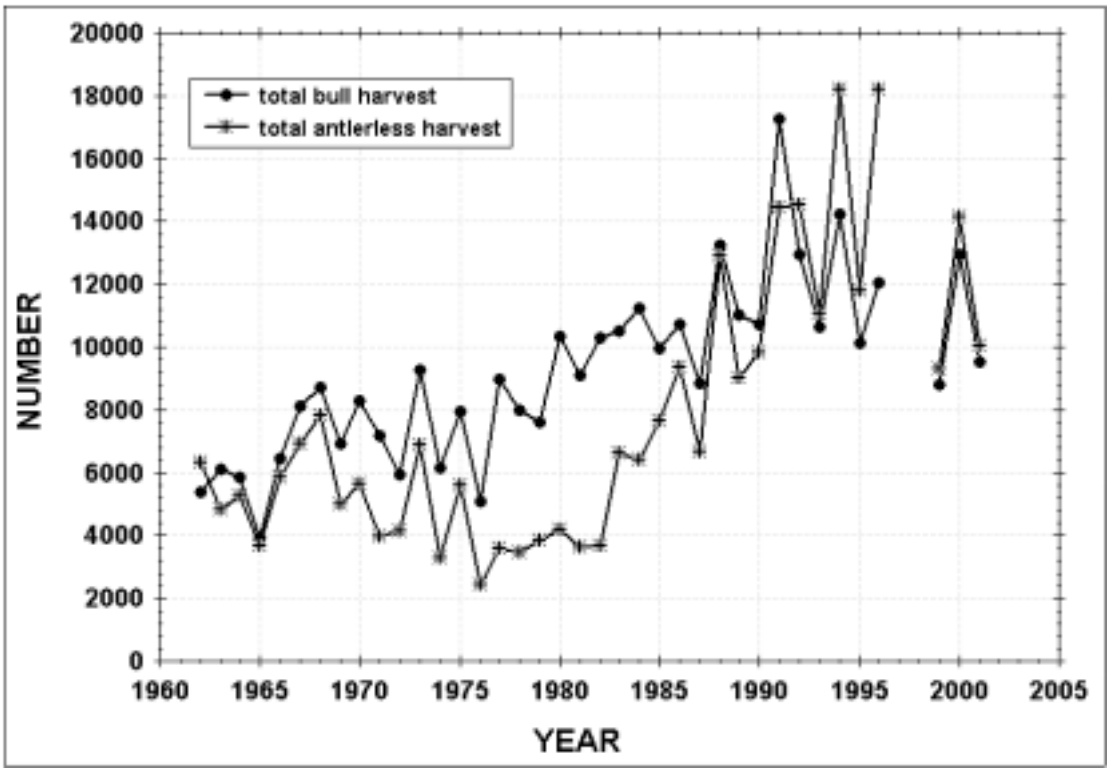

Figure 6. Total bull elk and antlerless elk harvest in Montana, 1960-2001.

Figure 7. Total deer harvest for white-tailed deer and mule deer combined 1960-2001 and total number of deer hunters in Montana, 1985-2001.

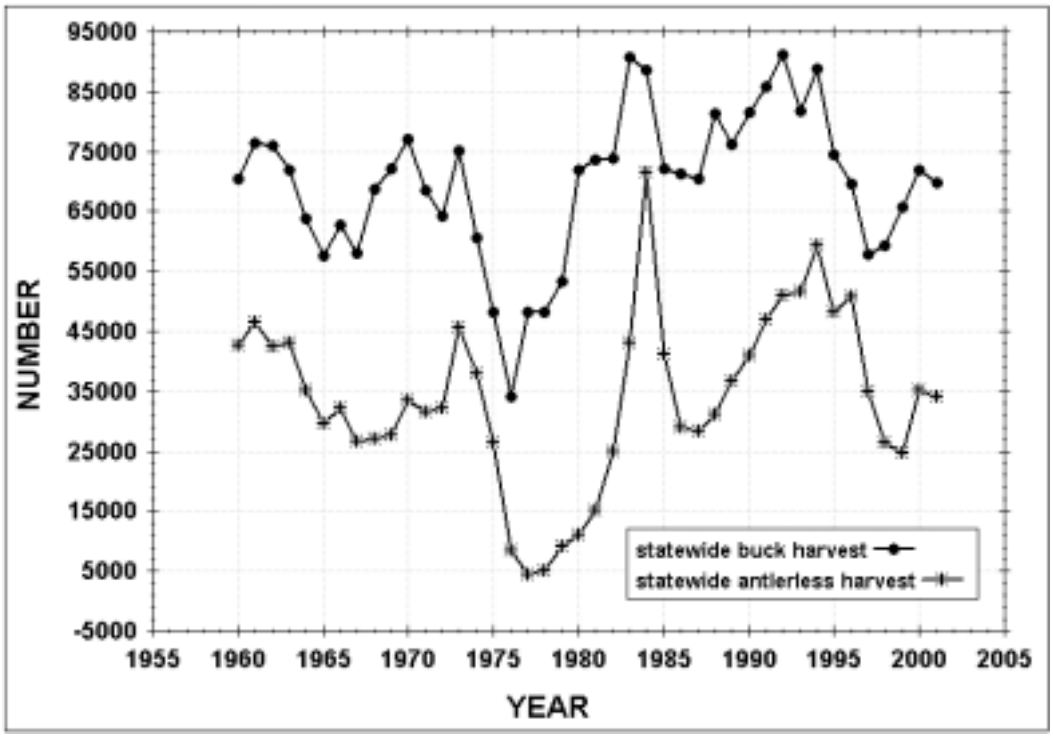

Figure 8. Total buck and total antlerless harvest for white-tailed deer and mule deer combined in Montana, 1960-2001.

Wildlife Habitat

Montana's diverse landscape can be described as six ecosystems based on topography, climate and vegetation (Table 2). The gray wolf is a habitat generalist and historically occurred across all vegetation types in Montana where there was adequate prey. Hence, current day wolf habitat will be defined more specifically by ungulate distribution and human settlement patterns.

A keystone of FWP's habitat conservation efforts is Habitat Montana. This program focuses on land conservation initiatives that benefit wildlife and maintain other natural resource values of private lands. FWP administers a network of Wildlife Management Areas (WMAs) that are managed to benefit wildlife (wintering ungulates in particular) and to provide opportunities for public recreation. These lands are purchased using earmarked revenue collected from the sale of hunting licenses and matching federal revenues. Vegetation management objectives on many of them are met in part by livestock grazing through cooperative agreements with adjacent landowners. FWP also participates in numerous federal habitat conservation programs, such as a Forest Legacy (USFS) and Habitat Conservation Plans (USFWS).

Table 2. Six major ecosystems of Montana based on topography, climate and vegetation.

Ecosystem	Topography	Predominant Vegetation	Climate
Montane Forest	Mountainous	Forest, usually conifer dominated	Maritime in northwestern Montana; continental in southwest Montana
Intermountain Grassland	Intermountain valleys and foothills	Grasslands or agriculture	Continental
Riparian	Gentle to mountainous; adjacent to surface water (lakes, rivers, wetlands etc.)	Various; when forested, dominant tree/shrub cover is deciduous	
Shrub Grassland	Level, gently rolling; locally steep in the mountains; dissected river breaks	Shrubs dominate; deciduous trees or shrubs in wetter areas	
Plains Grassland	Generally flat to rolling; badlands; glaciated in the north	Shortgrass prairie, prairie badlands; agriculture	Semiarid; cold winters, warm summers; highly variable
Plains Forest	Uplands in plains areas; dissected; moderately steep	Forest, usually conifer	

Plant Species of Special Concern

Montana supports a rich diversity of plant species. The Montana Natural Heritage Program has identified 365 species of vascular plants that are of special concern in the state (Heidel 1996). The term "special concern" is applied to plant species that could be reduced in number by land management to the point where they would be listed as threatened or endangered. USFWS is responsible for listing threatened and endangered plant species that require protection under the federal ESA.

Noxious Weeds

Introduced plant species often aggressively colonize sites where native vegetation and soils are disturbed. When these plants conflict with, interfere with, or otherwise restrict land management, they are commonly referred to as weeds. A plant that has been classified as a weed, such as leafy spurge or spotted knapweed, only attains a "noxious" status by an act of state legislation. Noxious weeds are classified in one of three categories (Appendix 3).

Land Management

Travel/Access Management

Responsibility for managing human access and travel on public lands resides with the administering land management agency, whether state or federal. Human access can be managed by time period (e.g. seasonal closures) or by localized area restrictions. FWP closes most WMAs to human access during the winter period to prevent disturbance to wintering ungulates. Outside of Yellowstone and Glacier national parks, USFS manages most federal lands utilized by wolves. Habitat, access and motorized travel are managed to meet resource objectives or legal requirements. Presently, there are no restrictions on road use or road-density on USFS or U.S. Bureau of Land Management lands due solely to the presence of wolves. NPS generally restricts motorized travel to paved routes only, while foot/horse travel is permitted most places. Foot travel is occasionally restricted due to seasonally imposed closures in areas of concentrated wildlife activity. While FWP continues to consult with land management agencies or private landowners about access and travel management, FWP has no legal authority to implement access or travel restrictions on land it does not manage. Instead, FWP works cooperatively with land managers to meet shared objectives.

Connectivity

Connectivity implies that wolves inhabiting the Northern Rocky Mountain Recovery Area in each of the three states are functionally connected through emigration and immigration events, resulting in the exchange of genetic material between sub-populations. This functional relationship is consistent with the biological intent of the original northern Rockies recovery plan and is an underlying prerequisite for successful, long term wolf recovery in the northern Rockies. Designating critical habitats or establishing travel corridors were not necessary to successfully recover the gray wolf in the northern Rockies. During the recovery phase, connectivity of the wolf population in the northern Rockies with the Canadian population was assured through legal protections, adequate prey populations, and the network of public lands – all of which facilitate dispersal and maintenance of genetic viability.

Sufficient dispersal and exchange of wolves between the three sub-populations in the future will be necessary to maintain the high degree of genetic variation of a regional wolf population. In isolation, none of the three recovered populations could maintain its long term genetic viability (USFWS 1994a). Isolation is unlikely if populations remain at or above recovery levels and regulatory mechanisms prevent chronically low wolf numbers or minimal dispersal (Forbes and Boyd 1997).

Connection between the U.S. and Canadian wolf populations is also an important underpinning of long term wolf recovery. Montana is an important link between Canadian wolves and wolves in YNP, Wyoming, and central Idaho. Canadian packs will likely continue to be a source of wolves dispersing into the U.S. while some U.S. wolves will disperse into Canada. Dispersal events across the international border will contribute to genetic diversity and provide an added measure of long term security for populations in both the U.S. and Canada.

Wolf Den and Rendezvous Sites

Wolves respond differently to human disturbance (Claar et al. 1999). Differing responses are due to a variety of factors, including the individuality of wolves, the specific setting, and whether the population is exploited or protected (Ballard et al. 1987, Mech et al. 1998, Thiel et al. 1998). In some studies, wolves moved pups after human disturbance, but pup survival was not affected (Ballard et al. 1987). It also appears that pups were not moved over long distances (Thiel et al. 1998).

Wolf activity on national forest lands in Montana generally hasn't prompted area closures or travel restrictions specifically because recreational use of these lands is often dispersed and sporadic. In national parks, area closures around den or rendezvous sites are sometimes implemented because of the strong public desire to view wolves and high visitation in the areas with wolf activity during the denning period. Areas around dens in YNP are closed until June 30. GNP established a seasonal closure area in the North Fork for one wolf pack since 1995 and has a framework for addressing future wolf activity. Ultimately, land management agencies may adopt seasonal or area restrictions independently from FWP.

Economics / Livelihoods

A number of economic resources or values could be affected if FWP assumes management responsibilities for the gray wolf. The following description is based on the most current information available on livestock depredation by wolves, big game hunting and outfitting, regional economic activity, cultural and social values, recreation, and FWP license revenues. The most detailed information available is specific to the GYA and southwestern Montana due to the in-depth analyses required prior to the reintroduction of wolves to YNP and central Idaho. Information is also available from northwestern Montana where wolves have been present since the mid-1980s, and statewide information is also presented.

Livestock Depredation

A concern about wolf recovery is the potential for wolves to stress, injure, or kill livestock (primarily cattle and sheep), guarding animals, or other domesticated animals such as llamas. Financial losses may result directly from wolf depredation whether confirmed or not, and indirect financial losses may accumulate because of increased management activities or changes to agricultural operations. These financial hardships accrue to individual farmers and ranchers and may be significant to them.

Tables 3 and 4 show total annual Montana cattle and sheep inventories and death losses from all causes since 1990. Cattle and calf inventories in the state have remained relatively stable at about 2.5 million animals. During this period, sheep inventories have declined significantly from over 650,000 to nearly 400,000 animals. While there has been significant variation in death losses for both cattle and sheep over this period, both species have seen losses in excess of 50,000 animals per year for predator and non-predator losses combined.

Currently, the Montana staff of WS investigates and records all reported wolf kills of domestic livestock or pets. Table 5 summarizes the Montana WS wolf depredation control program from 1997-2002, reported according to federal fiscal years. To date, nearly all depredation incidents investigated by WS within Montana occurred on private land, whereas over 80% of depredations in Idaho and about 50% of depredations in Wyoming were on public grazing allotments (Meier 2001). As wolf numbers and distribution increase in Montana, depredations may also increase on public lands. Between 300,000 and 400,000 sheep and cattle graze summer pasture on public lands in Montana (Bangs and Shivik 2001). Wolves don't necessarily depredate on livestock whenever livestock are encountered, but it is evident that

wolf packs that regularly encounter livestock will depredate sporadically (Bangs and Shivik 2001). Field observations have also indicated that even though an individual wolf or pack may not necessarily injure or kill livestock, livestock can become distressed and agitated when wolves are in the area and sometimes injure themselves in fence lines or on agricultural equipment. Overall, livestock losses appear related to the availability of wild prey, increasing pack size, and the learned behavior of individual wolves.

Table 3. Cattle and calf inventory, value per head, and death losses in Montana from all causes 1990-1999 (Montana Agricultural Statistics: October 1999, p. 146, information on January 1.).

Year	Total Cattle and Calf Inventory (animals)	Value per Head ($)	Total Animal Death Losses
1990	2,250,000	675	84,000
1991	2,650,000	755	65,000
1992	2,550,000	720	68,000
1993	2,500,000	760	65,000
1994	2,550,000	780	77,000
1995	2,700,000	675	70,000
1996	2,750,000	560	80,000
1997	2,700,000	600	100,000
1998	2,600,000	740	127,000
1999	2,600,000	660	82,000

Table 4. Annual predator losses (all species combined) and non-predator losses of sheep and lambs (number of head) in Montana, 1990-1998, (Montana Agricultural Statistics: October 1999, pp. 150-51).

Year	Jan 1 Sheep and Lamb Inventory	Predator Losses	Non-predator Losses
1990	663,000	39,100	79,900
1991	683,000	44,900	83,500
1992	678,000	41,200	63,000
1993	564,000	40,200	59,400
1994	534,000	42,900	53,800
1995	490,000	37,100	46,900
1996	465,000	31,200	39,200
1997	432,000	27,000	49,100
1998	415,000	21,800	38,700

Figures 9 and 10 display the number of confirmed cattle and sheep depredations by wolves in Montana since wolves first started recolonizing Montana in the mid-1980s. The number of wolf depredation incidents generally increased as wolves increased in number and distribution, with some variation from one year to the next. During 1999-2001, an average of 15 cattle and 27 sheep per year were confirmed as

wolf kills. This level of loss is <0.5% of the total death losses for cattle and sheep, respectively, in the state. However, as indicated above, these losses accrue to individual producers and only represent dead livestock that were confirmed killed by wolves. There were no confirmed cases of wolves killing dogs or llamas until 1995. Figure 11 displays confirmed dog and llama losses from 1995–2001.

WS field investigation reports summarize the evidence examined and confirm if wolves were the cause of livestock injury or death. Up until recently, Montana WS personnel did not officially categorize "probable" or "possible" wolf losses. However, these types of losses are now incorporated into field investigative procedures. The number of confirmed wolf-caused losses is expected to underestimate total livestock losses due to wolves because of insufficient evidence, lack of a carcass, or carcass visitation by more than one predator. The potential for unconfirmed and/or undocumented losses is problematic for individual livestock producers because unconfirmed losses are not covered by Defenders of Wildlife, a non-governmental conservation organization which has reimbursed owners for confirmed livestock losses through its privately funded compensation trust fund. It can also be problematic for livestock producers if losses are categorized as probable, because the Defenders of Wildlife compensates probable losses at 50% of the market value.

One study in Idaho examined interactions between wolves and domestic calves within the USFS Diamond Moose Grazing Allotment in central Idaho to evaluate the role of wolf predation on calf survival and movements (Oakleaf 2002). However, in Montana, there are limited sources of information available about wolf-cattle interactions in order to estimate the potential extent of unconfirmed wolf losses. WS investigative reports of wolf complaints may provide some insight. Table 6 indicates the number of domestic animals investigated, but not verified killed or injured by wolves. Some of these animals suffered injuries or death for reasons that, according to the WS agent conducting the investigation, were not wolf related while others may have been injured or killed by wolves, but the evidence is not sufficient to confirm it truly was a wolf.

WS field investigative reports of wolf-related complaints were reviewed for the calendar years 1999-2001 (WS unpubl. data). Those incidents which were noted as obviously caused by something else (e.g. noxious weeds or lightening) were not considered further. The remainder of the investigations that were officially unconfirmed as wolf-caused were tallied as "potential" wolf losses for the purposes of this EIS. Examples of investigative conclusions for "potential" wolf losses were "scavenged" or "undetermined." Defenders of Wildlife payment records were cross referenced to ensure that these "potential" losses were not compensated as "probable" wolf losses. Table 6 summarizes those livestock losses that were officially unconfirmed as wolf-caused by WS, but may have potentially been caused by a wolf. Because the public identified unconfirmed losses as an issue, these data will also be used to estimate economic losses due to unconfirmed losses (see Chapter 4). While even these data probably underestimate actual losses, they are the best available data for Montana at the present time.

Since 1987, Defenders of Wildlife (a conservation organization) has administered a wolf compensation trust to reimburse ranchers in the northern Rockies for confirmed livestock losses caused by wolves. Table 7 shows total payments since 1987. Payments are depicted by state boundary for Montana, Idaho, and Wyoming, irrespective of federal wolf recovery area boundaries. These payments may not fully compensate ranchers for their wolf-related losses to the extent that depredation is underestimated, and to the extent that ranchers incur indirect costs related to wolves such as fence repair and additional costs of managing livestock – wildlife interactions. Economic impacts of confirmed and "potential" livestock losses are addressed in Chapter 4.

Table 5. Summary of the number of wolf-related complaints received and investigated by the U.S. Department of Agriculture Animal and Plant Health Inspection Service Wildlife Services Wolf Depredation Control Program in Montana 1997-2002, according to federal fiscal years (October 1 – September 30). Source: U.S. Department of Agriculture Animal and Plant Health Inspection Service, Wildlife Services, Montana Field Office.

	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002 through 7/12/02
Date of first depredation	10/1/96	10/4/97	12/23/98	10/3/99	10/4/00	10/8/01
Total complaints received	40	39	56	55	36	45
Complaints involving livestock	40	39	56	55	36	43
Total complaints verified	13	15	20	19	20	25
Verified complaints involving livestock	13	15	20	19	20	23
Percent of total complaints verified	32.5%	38.4%	36.0%	36.0%	56%	55.5%

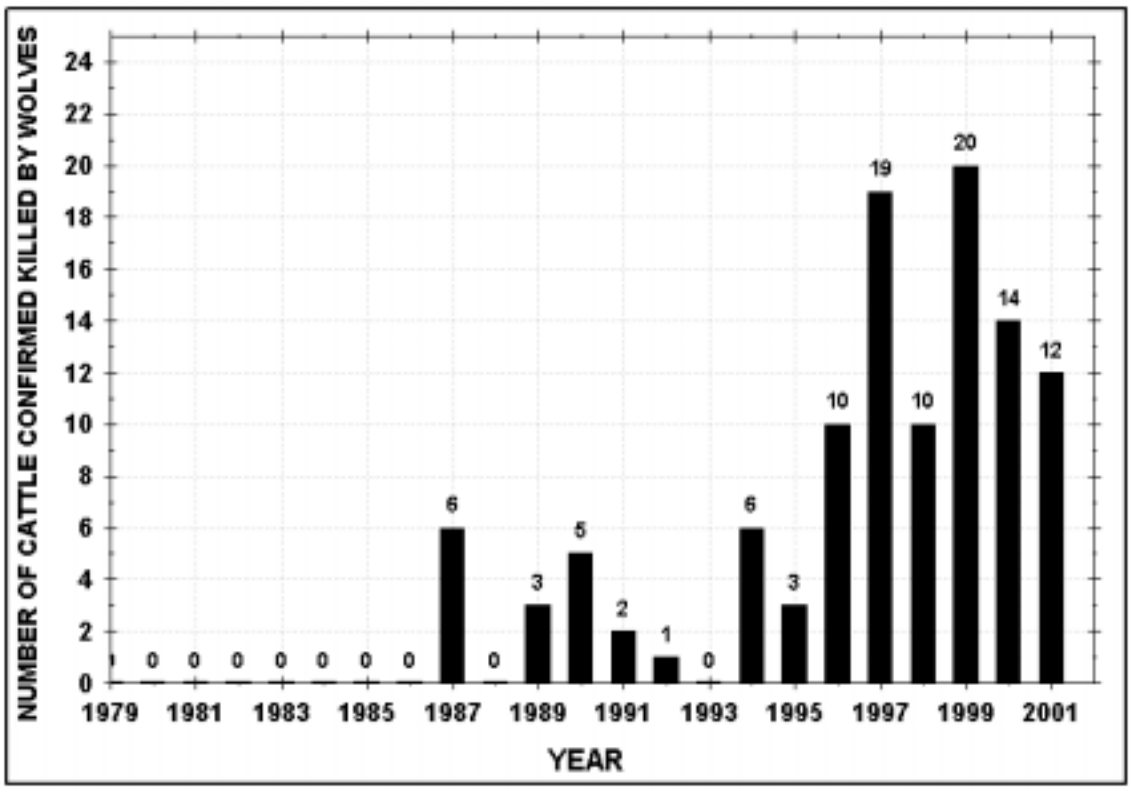

Figure 9. Number of cattle depredations confirmed by Wildlife Services as wolf-caused in Montana, 1980-2001 (USFWS unpubl. data).

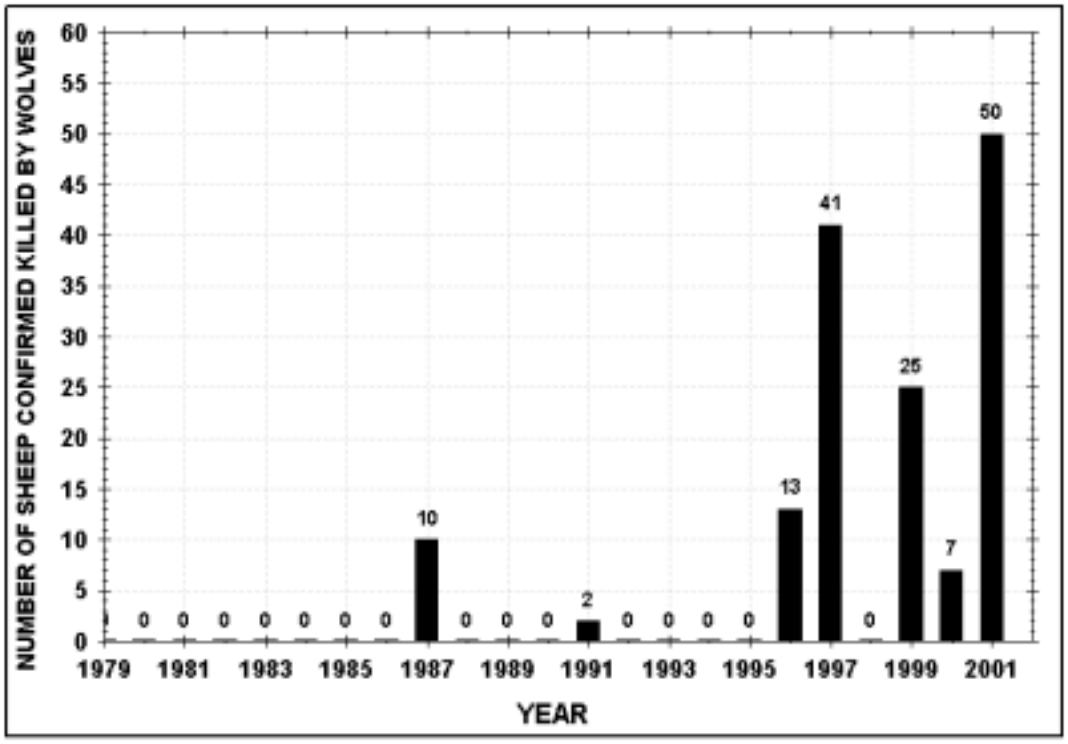

Figure 10. Number of sheep depredations confirmed by Wildlife Services as wolf-caused in Montana, 1980-2001 (USFWS unpubl. data).

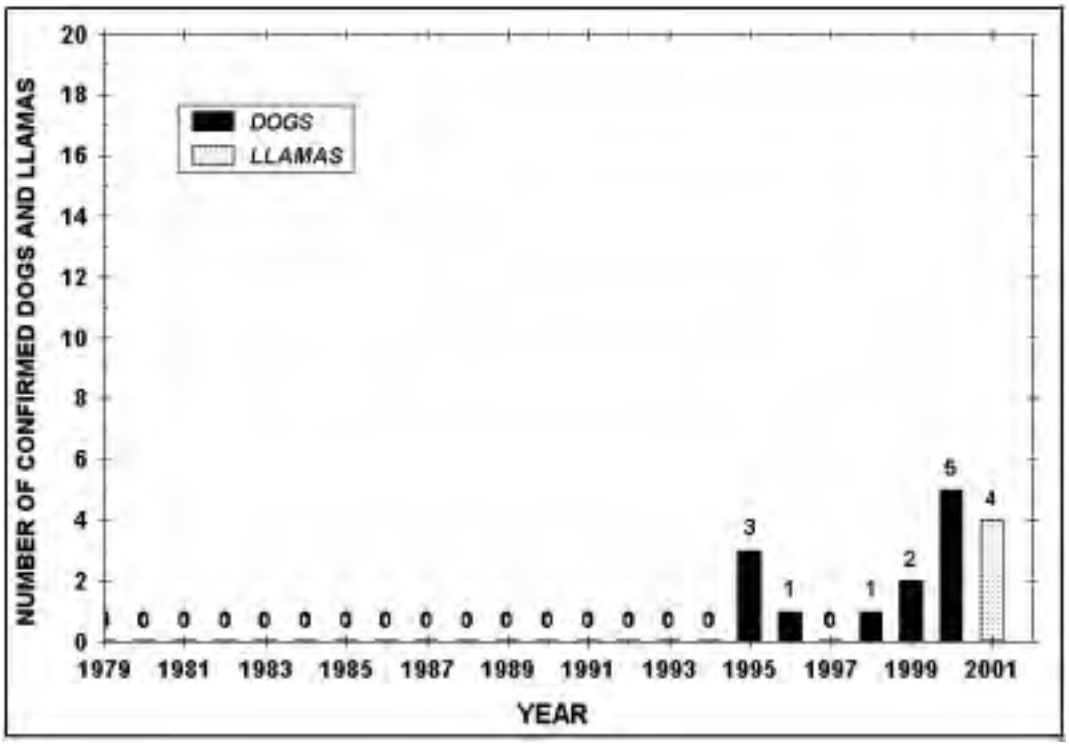

Figure 11. Number of domestic dogs and llama depredations confirmed by Wildlife Services as wolf-caused in Montana, 1980-2001 (USFWS unpubl. data).

Table 6. Livestock losses that were unconfirmed as wolf-caused by Wildlife Services but that could have potentially been caused by wolves, given that the investigation did not document any obvious cause of death or injury such as noxious weeds or lightening, during calendar years 1999-2001 (Wildlife Services, unpubl. data).

Potential Wolf-caused Losses	Calendar Year 1999	Calendar Year 2000	Calendar Year 2001
Cattle	11	8	6
Sheep	2	1	1
Horse/colt	1	3	1
Dog (herding or guarding)	0	2	0

Big Game Hunting

Hunting in general, and especially for big game, is an important activity for many Montana residents. For some hunters, wild game is a primary source of food for the family table. The 2001 National Survey of Fishing, Hunting, and Wildlife-associated Recreation found that residents spent over two million days hunting within the state in 2001 (USFWS and U.S. Department of Commerce 2002). Additionally, 97% of residents' total hunting days in 2001 were spent hunting within the state. Of all hunting opportunities, elk and deer hunting are some of the most highly valued, both in terms of total days spent hunting, and total expenditures by resident and non-resident hunters within the state. The number of elk hunters and hunter days in Montana has increased steadily through time (Figure 12). The number of hunters and hunter days are more variable for deer (Figure 13). Compared to deer and elk, opportunities to hunt moose are limited, but they are highly sought primarily by residents (Figure 14). Hunter success and total harvest vary, sometimes significantly, from year to year. Fluctuations are primarily due to hunting conditions during the season, changes in general regulations and antlerless opportunity, hunter access, changes in population status, and hunter success in previous seasons are also influential.

Big game hunters in Montana are concerned about the potential for big game population declines and subsequent declines in hunter opportunity due to wolf predation on ungulates. Hunters in Montana enjoy greater opportunity now than even 20 years ago. Since 1990, the hunting regulations, thus, hunter opportunity, for antlered males have been relatively consistent for deer and elk. In recent years, more specialized regulations were adopted to provide opportunities for larger-antlered, mature males for mule deer and elk in certain hunting districts. Hunter opportunity for antlerless elk has also been relatively stable statewide. The number of permits at the individual hunting district level varies through time. Opportunity has significantly increased in some localized areas consistent with management objectives to reduce elk populations through the expanded use of A-7 antlerless elk licenses in conjunction with antlerless elk permits. In other localized areas, antlerless elk opportunity has declined. Hunter opportunity for antlerless deer reflects a number of factors, including deer population status, fawn recruitment trends, and management objectives. The long term trend in the number of moose permits available is relatively stable, with the greatest fluctuation in FWP Region 1 (Table 8).

FWP used data collected through the telephone harvest survey to examine long term trends in elk and deer hunting participation at the FWP regional scale. Data from 1990-2001 were divided into two time periods (1990-94 and 1995-2001) to correspond to increasing numbers of wolves in northwestern Montana and wolf reintroduction into YNP and central Idaho. Significant events also occurring in that

time span include the severe winter of 1996/97, large summer forest fires, especially favorable hunting conditions in 1994, an overhaul of mule deer management, and other smaller regulation changes. The methods used to estimate hunter numbers changed in 1996, so the data for 1990-94 may be slightly over-estimated compared to 1995-2001. The average the number of elk hunters and the average number of elk hunter days in the early 1990s was about the same as the late 1990s (Figures 15 and 16). Although the exact number changes from year to year, there are no trends upward or downward. The number of deer hunters and deer hunter days is much more variable year to year. The long term averages are also variable and are generally lower in the late 1990s compared to the early 1990s across most FWP regions (Figures 17 and 18). This likely reflects real declines in mule and white-tailed deer populations due to environmental events and the resultant changes in regulations, particularly for mule deer. Hunter participation is affected by a host of factors beyond just the presence of a recovered wolf population.

The diet of gray wolves in Montana is expected to be primarily white-tailed deer, mule deer, elk and moose. While other ungulate species or small mammals may also be taken, they are expected to be a minor portion of the total diet. The actual proportion of whitetail and mule deer, elk, and moose will vary in part based on prey availability and relative prey vulnerability. In northwestern Montana (FWP Region 1 and a portion of Region 2), wolves are expected to prey primarily on white-tailed deer, elk, and moose (Kunkel 1999). The white-tailed deer is the primary ungulate species sought by human hunters as well. Figure 19 shows long term trends in FWP Region 1 white-tailed deer hunting. Figure 20 shows long term trends in FWP Region 1 elk hunting.

Table 7. Payment from the Defenders of Wildlife Bailey Wildlife Foundation Wolf Compensation Trust Fund (rounded to nearest dollar) for confirmed livestock losses or injuries caused by wolves, 1987-2001, in Montana, Idaho, and Wyoming (see www.defenders.org/wolfcomp.html).

Calendar Year	Montana	Idaho	Wyoming
1987	$3,049		
1988	none		
1989	$1,730		
1990	$4,700		
1991	$1,250		
1992	$374		
1993	none		
1994	$2,322		
1995	$1,633	none	None
1996	$3,506	$3,977	None
1997	$16,495	$3,761	$12,434
1998	$4,810	$6,380	$500
1999	$12,063	$15,794	$4,975
2000	$7,935	$24,773	$14,339
2001	$21,274	$9,627	$17,454
Total, all years	$81,141	$64,312	$49,684
Average per year since reintroduction (1995-2001)	$9,674	$9,187	$7,098

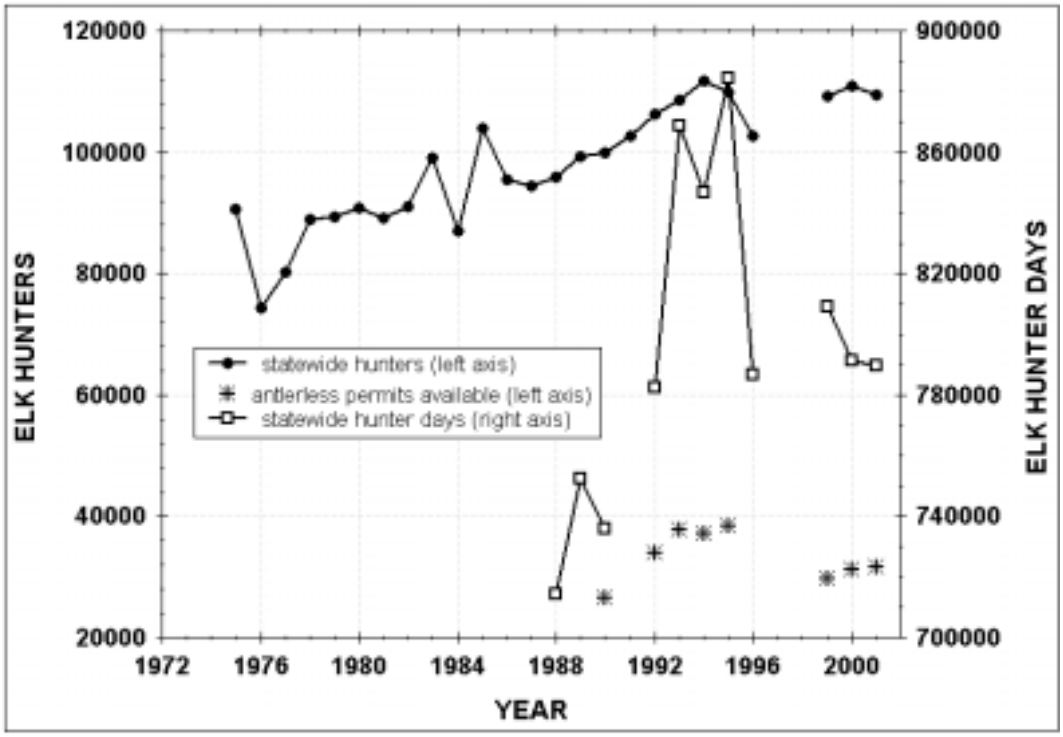

Figure 12. Total number of elk hunters, elk hunter days, and number of antlerless permits available in Montana, 1975-2001.

Figure 13. Total number of deer hunters and total hunter days for white-tailed deer and mule deer combined in Montana, 1987-2001.

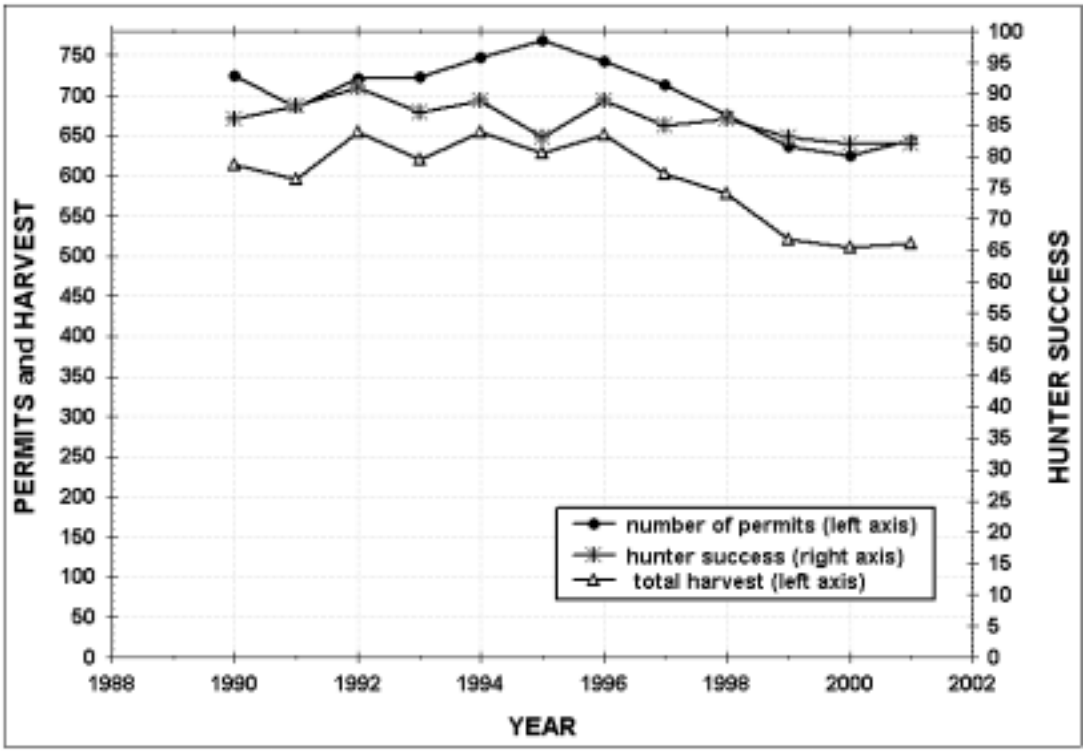

Figure 14. Total number of moose permits available, hunter harvest, and moose hunter success in Montana, 1990-2001.

Table 8. Average number of moose permits available in Montana Fish, Wildlife & Parks Regions 1-5 for 1995-2001. One standard deviation from the average (an indicator of how much the actual number varies through time) is shown in parentheses.

Montana Fish, Wildlife & Parks Region	Average Number of Permits (+/- 1 standard deviation)
Region 1	190 (+/- 59)
Region 2	75 (+/- 6)
Region 3	373 (+/- 12)
Region 4	10 (+/- 2)
Region 5	36 (+/- 4)

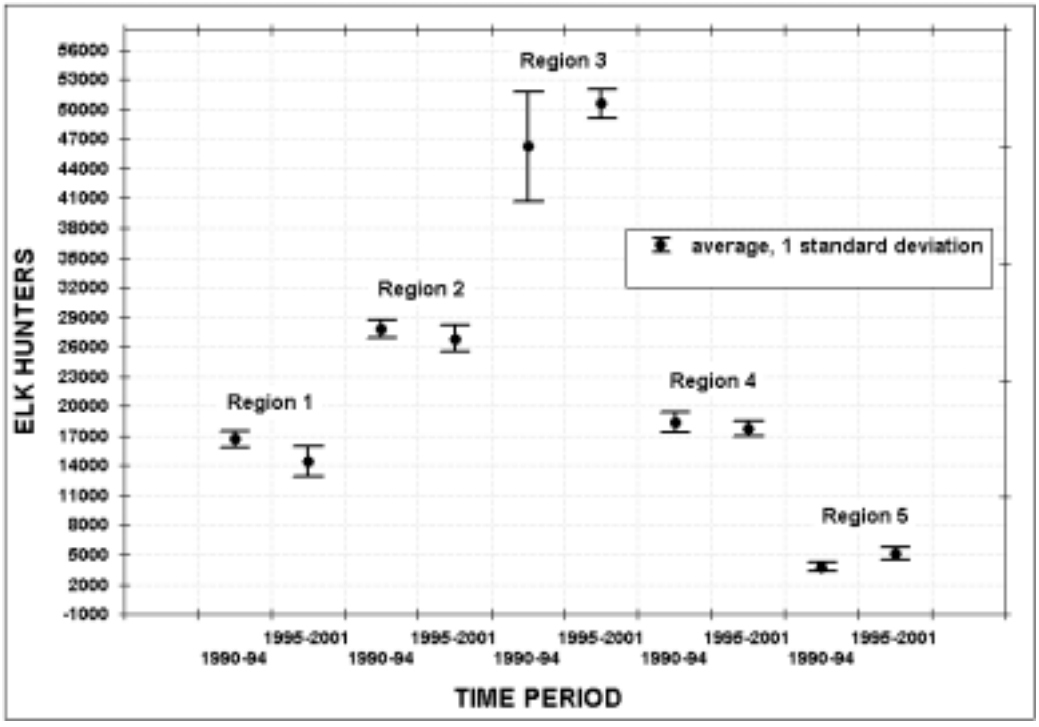

Figure 15. Average number of elk hunters for Montana Fish, Wildlife & Parks Regions 1-5 for two time periods 1990-1994 and 1995-2001. Standard deviation (an indicator of how much the actual number varies through time) brackets the average.

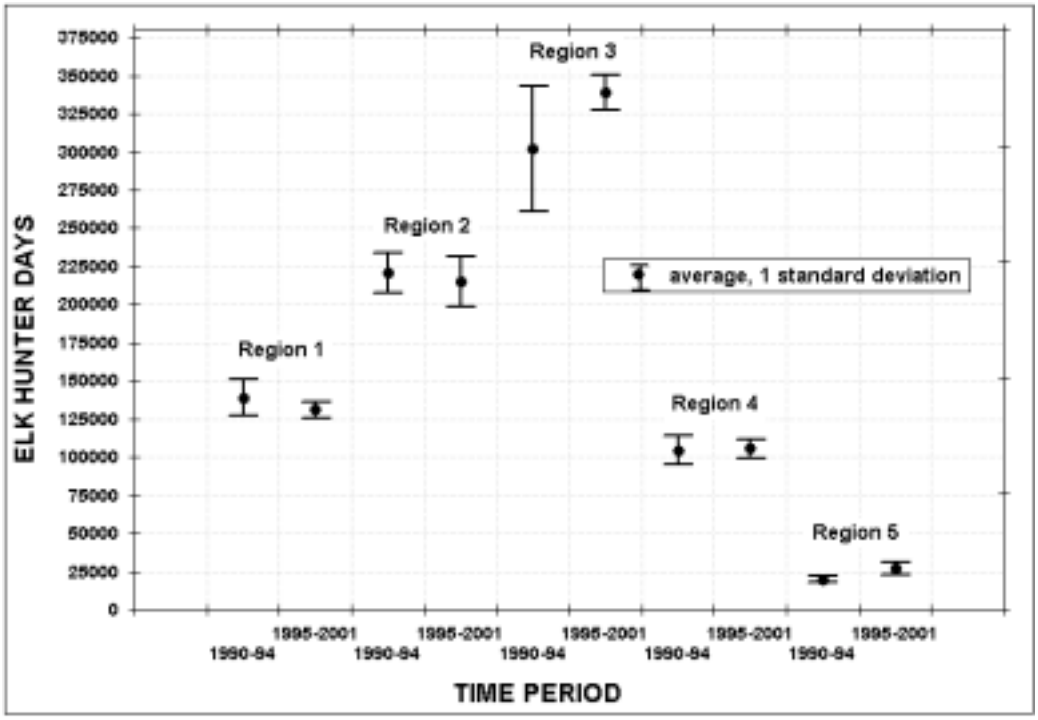

Figure 16. Average number of elk hunter days for Montana Fish, Wildlife & Parks Regions 1-5 for two time periods 1990-1994 and 1995-2001. Standard deviation (an indicator of how much the actual number varies through time) brackets the average.

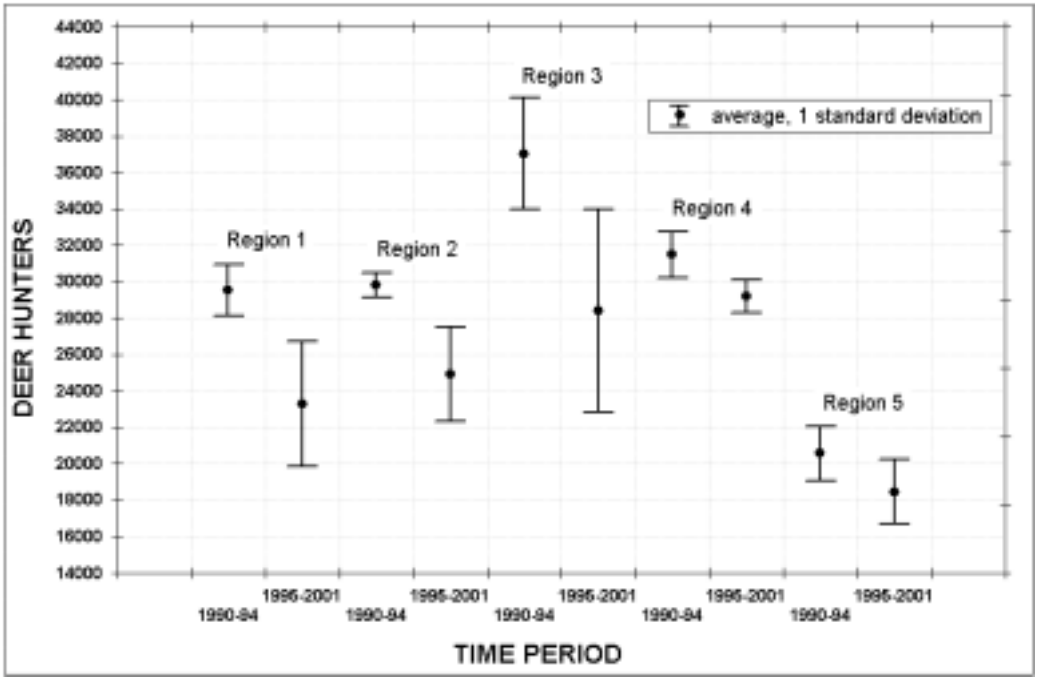

Figure 17. Average number of deer hunters for Montana Fish, Wildlife & Parks Regions 1-5 for two time periods 1990-1994 and 1995-2001. Standard deviation (an indicator of how much the actual number varies through time) brackets the average.

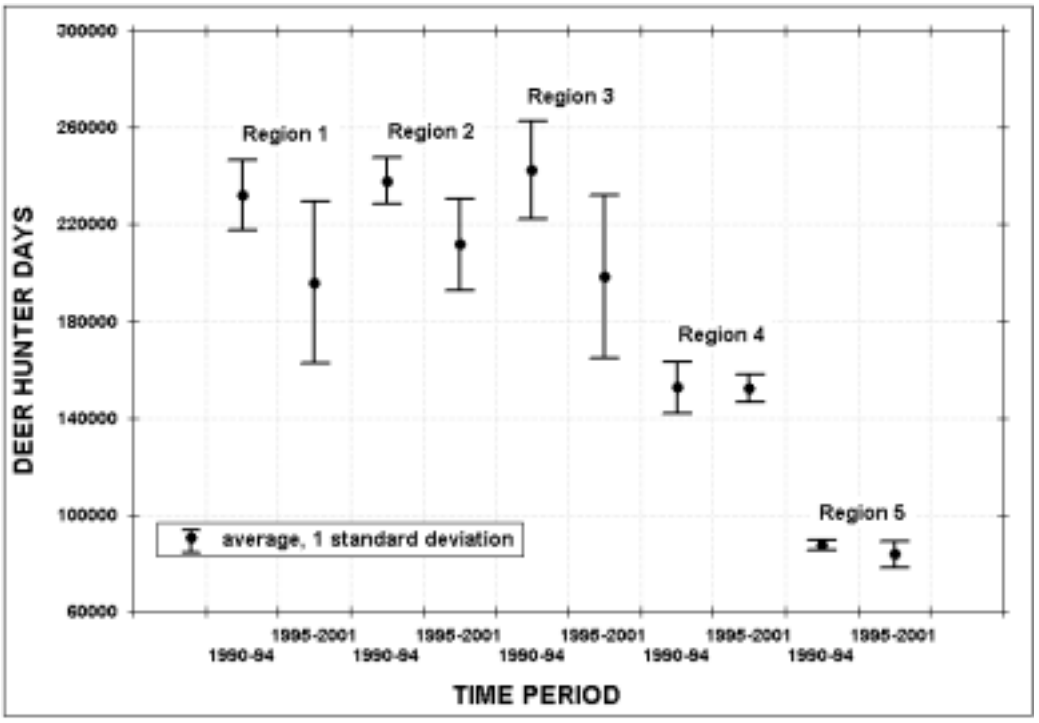

Figure 18. Average number of deer hunter days for Montana Fish, Wildlife & Parks Regions 1-5 for two time periods 1990-1994 and 1995-2001. Standard deviation (an indicator of how much the actual number varies through time) brackets the average.

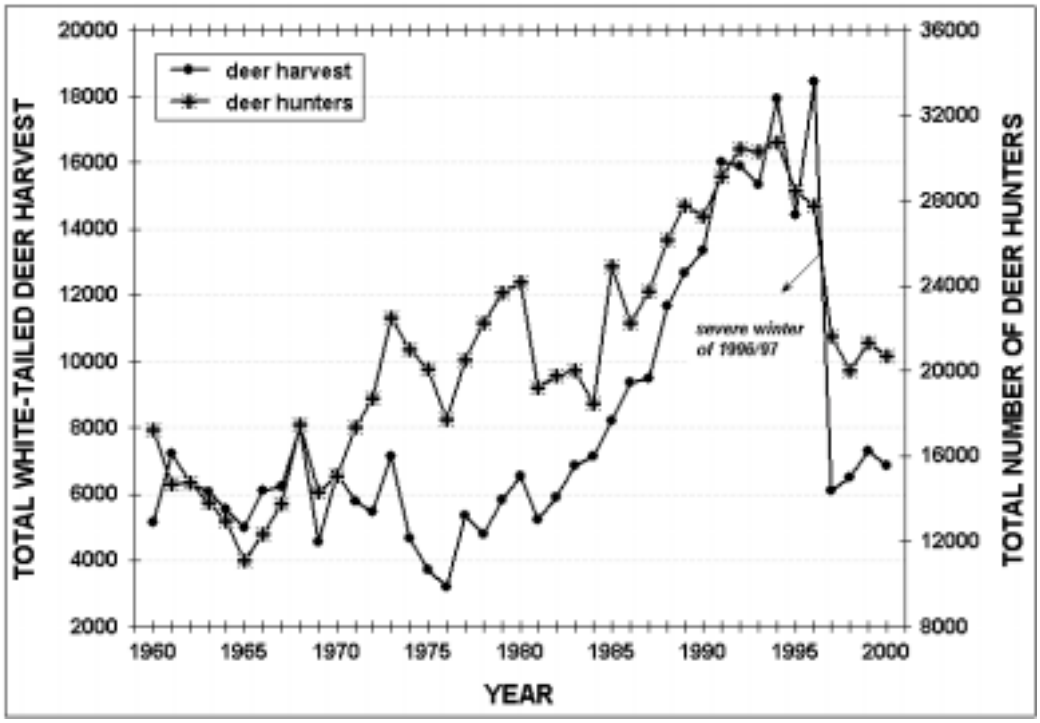

Figure 19. Montana Fish, Wildlife & Parks Region 1 white-tailed deer harvest and number of deer hunters, 1960-2000.

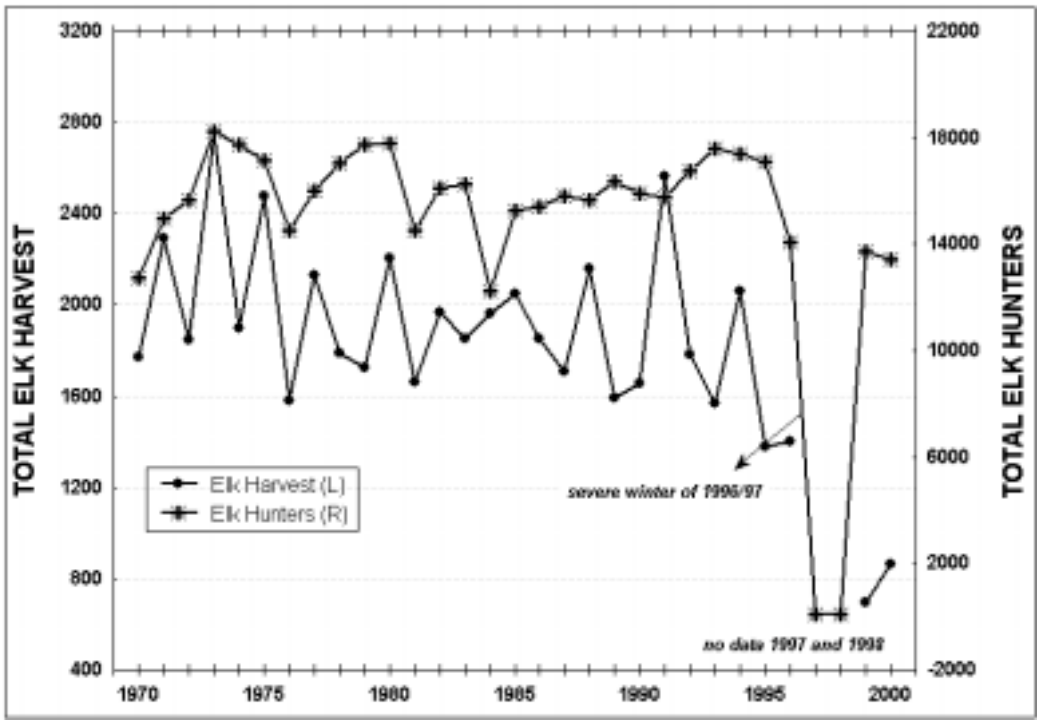

Figure 20. Montana Fish, Wildlife & Parks Region 1 elk harvest and number of elk hunters 1970-2000. Hunter opportunity for bull elk was reduced through adoption of the more restrictive "brow-tined bull" regulation in 1997-98 from the previous "antlered bull" regulation.

In other areas of the state, wolves are expected to prey primarily on elk, mule deer, and moose. In southwestern Montana, wolf packs seem to prey on elk more frequently than mule deer or moose (Smith et al. 2001; Gude and Garrott unpubl. data). Of the three species most likely to be killed by wolves in the Yellowstone area, elk are the most closely studied. Elk are important to human hunters as well.

The northern Yellowstone elk herd has always gotten a great deal of public attention because it is one of the largest and best known elk herds in the country, it is associated with YNP, and it provides a unique and very popular elk hunting opportunity during the so called "Gardiner late elk hunt." Since the 1970s, the northern Yellowstone elk herd has fluctuated up and down from less than 9,000 elk to about 19,000 elk, based on winter counts. The annual winter count changes 10-20% from year to year, but sometimes it changes by 30-40%. Compared to other Montana elk populations, northern Yellowstone herd counts are dynamic and very chaotic. During this same period, elk herds in other parts of southwestern Montana that are managed primarily by hunting, fluctuated 5-15% per year, with a clear long term trend toward increasing elk numbers. Most elk herds in southwestern Montana currently have two to four times as many elk now as they had in the mid-1970s.

Periodic, but significant winterkill events are the greatest single factor affecting elk numbers in the northern herd, with the last two occurring in 1989 and 1997. Winterkills of such magnitude do not occur in other Montana elk populations, even in severe winters. Yellowstone elk are predisposed to higher winter mortality due to harsher winter conditions, an older age structure in the population, high elk densities, and lack of an agricultural forage base to fall back on during hard winters.

Historically, northern range elk counts do not exhibit clear, long term trends. The northern herd has been surveyed from the air since 1967. Beginning in more recent years, two surveys are conducted – one in December and one in the spring. The purpose of the December survey is determine overall population trends by counting total elk numbers, using four fixed-wing aircraft simultaneously. These surveys yield trend information and are flown at the same time each year, regardless of counting conditions so that the count itself becomes an index to reflect changes in the elk population over time. The total count in December 2002 was 9,215 elk, with approximately 75% of the herd inside YNP. The previous count in December 2001 was 11,969, compared to a long term average of 13,846 elk from 1968-2002 (Table 9) (FWP 2002). Poor counting conditions likely contributed to an under count of the actual number of elk in the northern Yellowstone population for the 2002 count. Lack of snow cover, the wide distribution of elk at higher elevations, and difficulty in detecting elk were noted by observers. In previous instances of poor counting conditions, the previous or the following year's trend estimate were more consistent with long term averages. However, biologists concluded that the December 2002 data suggest that elk abundance has decreased since 1988 (Northern Yellowstone Cooperative Wildlife Working Group, 2003). Factors contributing to the decrease likely include predation, drought-related effects on pregnancy and calf survival, periodic substantial winterkill owing to severe snow pack, and human harvest during the Gardiner area late hunt. The second survey is flown in the spring (usually March) to determine how many elk wintered north of YNP and Dome Mountain and to classify the elk population to obtain an estimate of calf recruitment, expressed as the number of calves observed for every 100 cows (calf:cow ratio) (Table 9).

The northern herd demonstrates the natural ability to recover from periodic population declines. The most significant recovery started in 1968, following the end of deliberate elk reductions inside YNP and the end of largely unregulated elk hunting. The population increased from about 3,200 elk to over 12,000 just eight years later. Elk numbers have since recovered from major winterkills within five to six years. Wolves, however, are a new and significant source of mortality that will reduce total elk numbers. The exact extent of those overall population reductions, how wolf predation affects population growth rates, and the variation from year to year is unknown. FWP is concerned that during severe winters, more elk will be vulnerable to predation, and the combination of winterkill and predation could be significant.

FWP is also concerned about calf recruitment. There are early indications that the number of wolves that prey on the northern Yellowstone elk herd has leveled off because wolves may have reached their social and biological carrying capacity for area. Overall elk herd dynamics are largely influenced by environmental factors and predation dynamics that occur inside YNP boundaries. FWP's management of the portion of the herd that winters in the State of Montana north of YNP and the focus of the Gardiner late hunt will need to take that into consideration. Monitoring efforts are an important part of that management, particularly for determining the number of migrant, YNP elk wintering north of Dome Mountain.

While there are many factors that affect elk herd numbers and distribution (i.e. winter severity, weather during hunting season, drought conditions, and hunter pressure), the available data on the northern Yellowstone elk herd suggest that current herd size, hunter effort and hunter success are within the general ranges seen before the reintroduction of wolves. Data indicate that the late winter 2002 calf recruitment estimate (14 calves counted for every 100 adult cows) was a record low. Just like total elk numbers, calf recruitment in Yellowstone varies widely from year to year, ranging from 14-48 calves/100 cows, with an average of 32 calves/100 cows. However, across almost all areas of elk habitat in Montana, with a few exceptions, have experienced declines of 30-50% from the historical averages of the calf/100 cow ratios. This includes the elk population in the Missouri River Breaks. Recruitment in Yellowstone elk is typically lower than most elk populations in neighboring herds in southwestern Montana. Reasons for lower recruitment in Yellowstone elk include higher predation rates in a predator-rich environment that now includes wolves, lower pregnancy rates, an older age structure in female segment of the herd, long stressful winters, and the general physical condition of elk which varies with forage availability and quality. In recent years, persistent drought conditions have also affected overall herd health and condition, as well as recruitment rates. Long term studies are required to understand wolf effects on ungulates. Extensive studies of this wolf/ungulate relationship are now underway both within and outside YNP.

FWP administers the Gardiner late hunt to help manage elk numbers on winter ranges north of YNP. FWP's management objective is to provide winter range forage for migrant Yellowstone elk on a sustainable basis by managing elk numbers so they do not exceed the carrying capacity of the winter range and cause long term changes in plant communities or declines in forage production. To accomplish this, hunters are used as a management tool to help regulate the number of elk wintering north of the YNP boundary, by annually harvesting a portion of the migrant population. The number of antlerless elk permits available for the Gardiner late hunt changes through time, based on winter population counts, recruitment, previous hunter success, hunter participation, and the number of elk migrating to winter range north of YNP. The number of migrant elk available to hunters during the late hunt, thus hunter success, depends heavily on winter weather conditions that determine the timing and the size of elk migrations (FWP 2001b).

Elk hunting is also popular in other areas of southwestern Montana outside the Yellowstone area. Management objectives for many elk herds in southwestern Montana call for reducing total elk populations. Antlerless harvest opportunities have been liberalized in recent years where elk populations are exceeding social carrying capacity. Table 10 summarizes elk hunting information in FWP Region 3. As noted above, many different factors can affect herd population numbers and distribution. Similarly, many factors affect hunter harvest, independent of elk numbers. Weather, changes in hunting regulations and special permit availability, and human population changes in the region can all influence hunter success.

Outfitted Hunting. Outfitted hunting is significant and economically important to big game hunting in Montana. In the 2000 and 2001 hunting seasons, over 10,000 hunters used the services of a hunting outfitter. The majority of these guided hunters come to Montana from out-of-state, purchasing

nonresident hunting licenses and special permits. Only 1.5% of resident elk hunters utilize the services of an outfitter (King and Brooks 2001). Table 11 details the number of clients served (residents and non-residents) by outfitters for all species of big game hunting between 1995 and 2001. Outfitted big game hunting in Montana was relatively stable during that time.

Table 9. Summary of Northern Yellowstone Elk Herd population and late season harvest data, 1968-2002. Source: 2002 Gardiner Late Elk Hunt Annual Report, Montana Fish Wildlife and Parks (Table 9).

	2002	2001	2000	Last 5-year average (1998-2002)	Last 10-year average (1993-2002)	Long Term Average[a] (1968-2002)
Aerial Elk Count	11,969	13,400	14,538	12,668	13,908	13,846
Elk Migration north of Yellowstone National Park	5,104	3,833	3,500	4,753	5,260	5,207
Calves per 100 Cows (aerial survey)	14	29	23	24	27	32
Gardiner Late Hunt Harvest	1,103	1,221	940	1,233	1,363	1,095
Number of Permits	2,496	2,506	3,002	1,626	2,758	2,306
Hunter Success	56%	63%	42%	58%	63%	64%

[a] Long term trends vary by statistic due to differing availability of long term data.

Table 10. Montana Fish, Wildlife & Parks Region 3 elk hunting information, 1990-2001. No data are available for 1991, 1997 and 1998.

Year	Hunters	Hunter Days	Hunter Success	Bull Harvest	Antlerless Permits	Antlerless Harvest	Total Harvest
1990	38,590	248,367	23.0	4,248	13,484	4,691	8939
1991							
1992	46,475	291,878	28.9	5,739	16,391	7,697	13,443
1993	48,323	333,677	30.0	4,661	19,321	5,009	9,686
1994	51,653	334,229	34.1	7,391	20,803	10,279	17,602
1995	52,023	352,276	21.2	4,674	22,313	6,378	11,054
1996	48,944	326,135	36.0	7,057		10,619	17,676
1999	49,521	344,933	19.5	4,286	21,898	6,301	9,652
2000	52,139	344,264	30.0	6,750	20,993	11,417	15,641
2001	50,175	328,137	19.9	4,504	16,727	5,483	10,000

Table 11. Outfitter-reported total number of clients served on hunts for all big game species in northwestern Montana (Flathead and Lincoln counties) and southwestern Montana (Gallatin, Beaverhead, Sweet Grass, and Madison counties), 1995-2001. The totals include big game hunting clients served per year for both those clients buying licenses through the outfitter-sponsored license quota and those buying licenses on their own (non-sponsored). Source: Montana Board of Outfitters, Hunting Statistics.

Year	State of Montana		Northwestern Montana		Southwest Montana	
	Sponsored Non-Residents	Non-Sponsored[a]	Sponsored Non-Resident	Non-Sponsored[a]	Sponsored Non-Resident	Non-Sponsored[a]
1995	--	--	248	22	1,572	245
1996	8,235	858	307	16	1,791	273
1997	7,112	1,057	299	40	1,787	309
1998	7,032	1,148	424	25	1,638	393
1999	7,060	1,537	320	43	1,568	702
2000	7,875	2,327	429	126	2,017	709
2001	7,393	2,845	337	253	2,160	1,183

[a] Non-sponsored is the total of non-residents and residents who buy licenses on their own but who utilize the services of an outfitter during the big game hunting season. Non-sponsored totals may be slightly over-estimated because single clients could have hunted more than one species and may be tallied for each species hunted.

Regional Economics

Human Population. In 2000, Montana's population was 902,000 people. The population grew at a rate of about 12.9% between 1990 and 2000. Montana is sparsely populated compared to the entire country. There were an average of 6.2 people per square mile in 2000 - compared to 79.6 people per square mile in the United States as a whole. About 13 percent of the population in Montana is age 65 or older, slightly higher than in the United States as a whole (U.S. Census Bureau, State and County QuickFacts: http://quickfacts.census.gov).

Montana is rich in outdoor recreation opportunities. The state boasts national and international, recognition for its national parks, extensive wilderness areas, and high quality hunting, fishing, and wildlife viewing opportunities. Not surprisingly, residents of the state (and the three state region of Montana, Idaho, and Wyoming) value outdoor recreation highly. In a 1992 study, Duffield et al. (1993a) found that 79% of the people who live in the 20 counties immediately surrounding YNP (including the contiguous states of Idaho and Wyoming) participated occasionally or frequently in outdoor recreation activities, compared to 69% of people nationwide. GYA residents had higher rates of participation in fishing (73%, compared to 48% nationwide), viewing wildlife (90%, compared to 67%), and hunting (60%, compared to 25%). Not surprisingly, GYA residents were more likely to have hunted deer, elk, or moose, and were much more likely to have hunted these species in Idaho, Montana, or Wyoming than were residents of the U.S. as a whole.

The Montana Economy. In 1997, Montana per capita personal income was $19,660, having grown 5.5% since 1987 (U.S. Department of Commerce, Bureau of Economic Analysis 2002). Total personal income in the state was $17.3 billion in 1997.

The economic sectors most likely to be affected by wolf restoration are agriculture and tourism, including outfitting related to hunting and eco-tourism/wildlife viewing. Table 12 shows the key economic sectors (types of business producing similar goods and services) broken out at the finest level of detail available. Farm output (the total value of goods and services produced) accounts for approximately 6.3% of total state output. Farm income accounted for about 2% of the total personal income in the state, and livestock accounted for 48% of the value of farm products sold in the state in 1998 (Montana Agricultural Statistics Service 1999).

Tourism is also important "industry" in Montana. Visitors come to Montana in large numbers year round to see parks and wilderness areas, ski, float rivers, fish, hunt, and simply enjoy scenery. While they're here, these visitors spend large amounts of money for food, lodging, license fees, guide fees, and gifts among other recreation-related spending. These expenditures, in turn, have a large impact on incomes and employment in the region. Duffield et al. (2001) found that visitors to YNP who came from outside the three-state region of Montana, Idaho and Wyoming spent an average of $680 per person in the three states for winter visits in the region and $291 per person while on summer trips. Economic activity associated with tourism is captured by a number of sectors, including transportation services, hotels and other lodging, recreation services, and retail trade (Table 12). However, these sectors also include economic activity not specifically tied to tourist spending, so it is difficult to extract the total percentage of state economic output associated with tourism from Table 12. Nonetheless, the tourism industry is consistently ranked in the top three industries (as measured in total output).

Outfitting of all kinds, including fishing, hunting and ecotourism are combined into the recreation services sector of Montana's economy. This also includes skiing and other tourist services. Both big game hunting and outfitting services have a strong link to the level of economic activity through hunter expenditures. The 1996 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation found that U.S. residents spent $216 million in Montana on hunting trips, equipment, and licenses (USFWS and U.S. Department of Commerce 1998). USFWS estimated that of hunting-related expenditures within Montana, $182 million was spent specifically for hunting trips and equipment. About 69% of this, or $126 million, was specifically spent for big game hunting. Of the total hunting trip-related spending in Montana in 1996, nonresidents spent 65% of the total (Table 13). FWP studies have demonstrated that trip-related hunting expenditures are even higher than the national survey results. Residents and nonresidents spend an average of $186.9 million on their hunting trips in Montana annually (Duffield and FWP 1988). Approximately 45% of those expenditures are by nonresidents.

Non-hunting outfitting appears to be increasing in Montana, particularly for visitation in Montana's national forest roadless or wilderness areas. (Adams 2000). According to a 1998 survey of outfitters using these wildland areas, hunters accounted for less than 14% of all clients and a fifth of their service days. A similar survey published in 1990 found that in the Montana commercial outfitting industry as a whole, 24% of clients were hunters (Taylor and Reilly 1990). Possible explanations for the shift include changing interests in outdoor recreation away from hunting, thus changing consumer demand, and a need for outfitters to generate income during other seasons of the year. Those non-resident clients who do not hunt but utilized the services of a wildland outfitter for outdoor recreation (e.g. wildlife viewing, or photography) spent $37.2 million for food/lodging, transportation, and outfitter fees in Montana in 1998 (Adams 2000).

Table 12. State of Montana, Output, Employment and Income: 1999. Industry output is reported in millions of 1999 dollars. Source: Minnesota IMPLAN Group 2002.

Industry	Industry Output	Employment	Employee Compensation	Proprietor Income
Farms	2,385	32,009	137	289
Forestry Products	78	1,001	4	7
Ag Services	125	4,798	23	33
Metal mining	331	1,939	107	(18)
Coal Mining	257	970	65	14
Oil mining	253	2,058	46	18
Non-metal mining	111	951	41	0
Construction	3,766	39,527	778	380
Food processing	819	2,848	82	1
Textiles	2	24	0	0
Apparel	69	717	7	1
Wood products	1,455	8,827	268	31
Furniture	72	871	13	4
Pulp and paper	327	810	45	3
Printing and publishing	308	3,525	84	3
Chemicals and allied	234	712	29	5
Petroleum products	1,554	909	63	2
Rubber products	62	429	11	0
Leather products	4	103	1	0
Stone, glass and clay	212	1,244	38	4
Primary metals	270	1,101	50	15
Fabricated metal	100	1,159	28	2
Industrial machinery	419	2,109	61	2
Electrical equipment	79	474	16	1
Transportation equipment	113	596	21	1
Scientific instruments	52	370	13	1
Miscellaneous mfg	167	1,963	43	1
Railroads and Related Services	499	2,902	192	0
Local- Interurban Passenger Transit	63	1,820	24	4
Freight Transport and Warehousing	968	9,353	192	109
Water Transportation	12	81	1	0
Air Transportation	200	2,539	82	3
Pipe Lines- Except Natural Gas	56	110	7	0
Transportation Services	65	1,511	30	8
Communications	726	4,040	144	27
Utilities	1,025	3,070	169	12
Wholesale Trade	1,623	20,683	630	40
Retail Trade	3,402	104,190	1,379	159
Banking	1,024	6,839	208	6
Credit Agencies	146	3,878	70	7
Security and Commodity Brokers	171	1,441	83	17
Insurance Carriers	284	2,630	97	0
Insurance Agents and Brokers	198	5,102	81	36
Real estate	2,222	12,948	70	108
Hotels and Lodging Places	405	11,600	149	12
Personal services	247	10,360	53	55
Business services	1,023	22,913	299	154
Automotive services	477	7,066	102	52
Repair services	199	3,729	36	27
Motion Pictures	123	1,832	18	5
Recreation services	366	13,272	94	56
Health services	2,508	42,919	1,190	231
Legal Services	254	4,280	116	65

Table 12. Continued

Industry	Industry Output	Employment	Employee Compensation	Proprietor Income
Education services	185	7,053	83	7
Social services	447	11,839	189	0
Non-profit organizations	627	11,392	185	1
Professional services	960	19,734	334	104
State & local non-ed government	1,342	25,856	820	0
Federal non-military	913	17,647	721	0
Special sectors	(180)	0	0	0
Federal Government - Military	501	8,563	290	0
State & Local Government, Education	1,028	35,451	1,028	0
Domestic Services	28	3,588	28	0
Totals	37,763	554,276	11,266	2,102

Table 13. Summary of expenditures associated with hunting in Montana by all U.S. Residents, 1996. Source: USFWS and U.S. Department of Commerce 1998, Table 15. Not all expenditure items are included in the table, so the items shown will not sum to the total.

Expenditure Item	Amount ($1000s)	Average per Hunter
Total spending	215,878	954
Food and lodging	44,043	226
Transportation	36,244	186
Other trip costs	19,318	99
Equipment costs	45,764	207
Licenses and land leasing and ownership	31,007	159

Recreational and Social Values

Hunting Values. Wolves have the potential to influence several types of recreation, including hunting and tourism. The net economic values that an individual places on these recreational experiences have been estimated on a per-trip or per-day basis in a number of studies. This net economic value (sometimes referred to as willingness to pay) is the additional amount of money hunters and other recreationists say an activity is worth over and above actual expenditures. Expenditures commonly include transportation costs, lodging, food, guide fees, and other purchases, excluding license fees. Nonresidents place substantially higher values on their hunting-related recreational experiences in Montana than residents (Table 14). An examination of nonresident big game license sales (discussed below under FWP Fiscal) shows that nonresident hunting values are substantial based on their willingness to pay for the license fees (up to $1,100) for the right to hunt deer and elk in Montana. Data from a 1992 survey of outfitter fees paid for hunting on private land also tend to show substantial value attached to hunting in Montana (Duffield et al. 1993b). For the relatively small subsample of outfitters who paid landowners on a per-animal-harvested or per-hunter basis (as opposed to the more common lump sum rental for a season's access), the per-animal charges were between $50 and $200 while the per hunter charges were between $10 and $1000.

Table 14. Comparison of net economic value (NEV) per day estimates for Montana deer and elk hunting trips (in current 2002 dollars). Sources: Duffield and Neher (1990) and King and Brooks (2001) for deer and elk, respectively.

Species	NEV/day for Montana Resident Hunters	NEV/day for Nonresident Hunters
Deer	$74.00	$102.44
Elk	$109.00	$116.00

Wildlife Viewing Values. Visitors to Montana often cite wildlife watching as an important aspect of their trips to the state. As with hunting, studies have also estimated the net economic value of a day of watching wildlife. USFWS estimated that within the USFWS region containing Montana, residents spend an average of 10.5 days per year engaged in wildlife viewing. USFWS further estimated that the net economic value of wildlife viewing in the region containing Montana is $31 per day (USFWS and U.S. Department of Commerce 1998).

Relatively more is known about the wildlife viewing values of visitors to YNP than about visitors to GNP or Montana as a whole. Visitors entering YNP from Montana in 1999 cited wildlife viewing as a primary activity during their trip. Overall, 62.1% of winter park visitors and 94.9% of summer park visitors listed wildlife viewing as an activity (Duffield et al. 2001). Surveys of both winter and summer visitors to YNP have also consistently shown that the gray wolf is one of the species which visitors desire to see the most (Table 15). Interestingly, grizzly bears are some of the most rarely seen of all species in the park (Duffield et. al 2001). However, frequently seen species are also in the top 10 list, such as bison, elk and bighorn sheep. These findings suggest that visitors have well-defined preferences for wildlife viewing and that preferences across winter and summer visitors are similar.

Table 15. Wildlife species visitors to the Greater Yellowstone Area would most like to see, in order of preference. Preference is measured as the percentage of respondents who cited a species as one of the top three species they would most like to see on their trip. Rank is shown in parentheses. Source: Duffield et al. 2001.

Species	Winter Visitors	Summer Visitors
Grizzly Bear	36.0% (2)	58.0% (1)
Wolf	41.1% (1)	36.0% (2)
Moose	31.2% (4)	35.0% (3)
Mountain Lion	31.9% (3)	31.0% (4)
Black Bear	12.8% (9)	29.0% (5)
Elk	26.1% (5)	14.0% (9)
Bison	27.6% (6)	19.0% (8)
Bighorn Sheep	25.0% (7)	23.0% (6)
Bald Eagle	22.1% (8)	21.0% (7)
Wolverine	11.9% (10)	6.0% (10)
Trumpeter Swan	6.3% (11)	4.0% (11)
Sample Size	1127	1302

Recreational Trip Values. Two of the nation's premier national parks (Yellowstone and Glacier) are found, at least partly, within Montana. A number of studies documented the popularity of these parks as tourist destinations, both nationally and internationally. A 1999 summer visitor survey for YNP found that Montana, Wyoming, or Idaho residents placed a net economic value of $56.80 for their summer trips and nonresidents placed a value of $349.09 on their trips (Duffield et al. 2000).

The 1999 YNP winter and summer surveys also asked visitors whether the possibility of seeing wolves had affected their decision to visit the GYA (Table 16). Nineteen to 42% of visitors reported that seeing or hearing wolves was one of the reasons for making their trip to the GYA. However, a substantial majority would still have made the trip to the GYA if wolves were not present. Approximately 3.5% of current visitors to the park would not make the trip if wolves were not present in the park. Given that there are over three million visitors annually to YNP, it represents over 100,000 visitors.

Table 16. Percent of respondents who reported whether the possibility of seeing wolves affected their decision to visit the GYA. Source: Duffield et al. 2001.

Question/ Response	Winter	Summer	
		Residents	Nonresidents
Was seeing or hearing wolves one of the reasons for making the trip to the GYA?			
Yes	35.9%	41.6%	42.0%
No	64.1%	58.4%	58.0%
Sample size	1,143	221	1,070
If yes, would you still have made this trip even if wolves were not present in the GYA?			
Yes	76.1%	73.9%	80.1%
No	10.2%	8.7%	7.9%
Not sure	13.7%	17.4%	12.0%
Sample size	551	92	443

Social and Cultural Values. Wolf recolonization in northwestern Montana and the reintroduction of wolves into YNP and central Idaho raise a number of issues, including their place in the ecosystem and their effects on people and other animals. Because public comments were used to develop the alternatives for this EIS and to assess their consequences, public issues and concerns are integrated throughout the draft EIS. The purpose of this section is to discuss the social and cultural attitudes and values that underlie the public comments, and to lay the groundwork for assessing how cultural values and the social environment could be affected by the various alternatives.

When discussing social and cultural implications associated with wolves, the primary affected environment is the values of people living within or near the recovery areas and the values of people statewide. To many, the gray wolf symbolizes wildness and is valued intrinsically for reinhabiting parts of their former range. Others value the role the wolf plays in the larger ecosystem. For many farmers and ranchers, however, the wolf is a potential threat to their livestock and livelihood. Also, many people fear wolves and view them as a personal threat. For Native Americans, the wolf plays an important positive role and many traditional views of the wolf continue today. The gray wolf attained a cultural significance to many Native American tribes in Montana. For the Blackfeet, the wolf is a powerful religious symbol and is known as a "medicine animal" (Vest 1988).

Values can also be described in terms of attitudes toward wildlife and wildlife management. Respondents to the 1999 winter and summer YNP visitor surveys were asked to state their level of agreement or disagreement with a number of statements pertaining to wildlife and the environment. Table 17 shows how Montana residents responded during the two visitor surveys. Responses are remarkably stable between winter and summer YNP visits and both sample groups indicate a very high level of environmental interest and concern.

What drives the differences in attitudes towards wolves might be summed up as the perceived chance of personal benefit or loss resulting from the presence of wolves. Those who feel they will benefit either directly or vicariously tend to favor wolf restoration, and those who perceive the threat of personal loss oppose restoration. A survey in Flathead County in northwestern Montana indicated that most respondents were supportive of wolves naturally recolonizing the area, but that support could decrease if recreational and commercial land uses were restricted to promote wolf recovery (Tucker and Pletscher 1989). One survey in Wyoming found that most respondents who opposed wolf reintroduction would not change their responses even if a variety of their concerns were met, such as providing financial compensation for livestock losses due to wolves (Bath and Phillips 1990). This firmness of position indicates that some attitudes towards wolves have their basis not only in the tangible fear of financial losses but also, more deeply, in the history of the area and its people. Furthermore, attitudes towards wolves are rooted in society at least as much as they are based on wolf biology and will not be susceptible to campaigns intended to change them. Williams et al. (2002) advises that wildlife managers would do well to recognize that and maintain open dialogue with the general public and the affected interests.

One of the most detailed sources of data on Montana resident attitudes towards wolves specific to the wolf reintroduction effort is a survey of GYA residents conducted in 1993, including Montana counties contiguous to the park and several mostly rural counties in Idaho and Wyoming (Table 18). The responses show both general support for wolf presence in the park and specific concerns associated with potential problems related to livestock depredation and reduced big game hunting opportunities outside the park.

Table 17. Comparison of responses by Montana residents to statements concerning wildlife and wildlife habitat when asked during winter or summer visits to Yellowstone National Park. Source: Duffield et al. 2001.

Statements	Percent who agree		Percent who disagree	
	Winter	Summer	Winter	Summer
I have a great deal of concern for protecting wildlife habitat	95.1%	97.7%	1.2%	1.4%
Wildlife species must be beneficial to humans to deserve protection	20.7%	24.4%	68.0%	65.6%
It's important to protect rare plants and animals to maintain genetic diversity	83.5%	87.8%	5.9%	2.7%
I would be willing to contribute to protecting wildlife habitat even if I never see or enjoy the animals	67.6%	63.2%	10.8%	10.0%
Sample size	436	219	436	219

Table 18. Greater Yellowstone Area residents' attitudes toward issues surrounding wolf reintroduction. The "percent agreeing" includes the sum of responses for the categories "somewhat agree" and "strongly agree." "Percent disagreeing" was also aggregated. Because other response categories are not reported (e.g. "no opinion" and "not applicable"), data will not sum to 100%. Source: Duffield et al. 1993a.

Attitude Statement	Percent Agreeing	Percent Disagreeing
I would derive satisfaction from just knowing wolves are present in Yellowstone Park	46.5%	41.0%
I dislike even the idea of wolves being present in Yellowstone Park.	35.1%	57.4%
I might personally benefit from getting to hear or see wolves in Yellowstone Park.	47.5%	42.1%
I would like it if visitors to Yellowstone Park had the opportunity to hear or see wolves.	59.1%	31.2%
I would experience reduced hunting opportunities if wolves were reintroduced to YNP	21.3%	32.4%
I would be disappointed if hunters hunting on lands adjacent to YNP experienced reduced hunting opportunities due to the reintroduction of wolves into the park.	41.2%	36.2%
I would experience livestock losses due to wolf predation in my farming or ranching operation if wolves were reintroduced to Yellowstone Park.	23.4%	13.9%
I would be disappointed if ranchers outside the park experienced livestock losses due to the reintroduction of wolves into the park.	72.6%	13.7%

FWP Fiscal Environment

FWP derives a large portion of its annual operating budget from the sale of fishing and hunting licenses and matching federal dollars collected through excise taxes on the purchases of hunting and fishing related equipment. The choice of wolf conservation and management policies has the potential to affect FWP finances directly by how a wolf program is funded and indirectly through the interaction between wolves and their ungulate prey populations. For example, a substantial decrease in deer or elk numbers, by whatever cause or combination of causes, could lead to a lower level of hunter participation or lower license revenue. The decline may be exacerbated or prolonged in localized areas by the presence of a recovered wolf population. However, new license revenue may be generated by implementing a regulated harvest program for wolves as a management tool within the broader context of the overall program. Table 19 shows annual trends in Montana resident deer and elk license sales and prices. The number of deer licenses sold has declined slowly since 1980, while the number of elk licenses sold has remained relatively stable. Table 20 summarizes license revenue for the year 2000 from the sales of the major classes of deer and elk licenses and special permits.

Despite relatively consistent hunting regulations and hunting opportunity for antlered deer and elk, statewide resident elk and deer general license sales have declined since the mid-1990s. A survey of elk license holders, who purchased a license in 1996 and 1997 but not in 1998, was conducted to determine the reasons why these individuals did not purchase a license in 1998. The most frequently checked reason was *"other responsibilities a higher priority"* followed by *"access has become restrictive, low elk population, unsuccessful at special elk permit drawings, and unable to hunt with family or friends"* (FWP unpubl. data). Another factor influencing elk license sales is the aging of resident hunters. A study in

1988 showed that the average age of hunters was 38 years old. A similar study in 1998 revealed the average to be 46 years old (FWP 1988, 2001c). Therefore, license sales for resident hunters in the future will likely be influenced by factors well beyond the presence of a recovered wolf population.

By contrast, nonresident demand for Montana hunting licenses remains high, despite a considerably higher cost compared to residents. Nonresidents submit more applications than the nonresident allocation quotas for most categories of deer and elk licenses. About 85% of the total deer and elk license revenues come from nonresident license sales (Table 20).

Table 19. Trends in resident Montana deer and elk license sales and prices, 1980-2000. Source: Montana Fish, Wildlife and Parks license data.

Year	Adult Elk License		Adult Deer A License	
	Licenses Sold	Price	Licenses Sold	Price
2000	68,826	$16.00	88,233	$13.00
1999	72,281	$16.00	91,606	$13.00
1998	78,844	$16.00	92,569	$13.00
1997	77,252	$16.00	75,344	$13.00
1996	82,433	$16.00	107,689	$13.00
1995	87,244	$16.00	117,967	$13.00
1994	87,480	$16.00	121,903	$13.00
1993	86,917	$13.00	118,700	$13.00
1992	85,895	$13.00	121,918	$11.00
1991	82,680	$10.00	117,325	$11.00
1990	79,437	$10.00	114,106	$9.00
1989	78,604	$10.00	111,750	$9.00
1988	74,473	$10.00	111,515	$9.00
1987	59,674	$10.00	105,813	$9.00
1986	62,060	$10.00	108,196	$9.00
1985	63,862	$10.00	111,698	$9.00
1984	62,001	$10.00	122,309	$9.00
1983	64,376	$10.00	128,847	$9.00
1982	70,669	$9.00	131,051	$9.00
1981	87,070	$8.00	138,156	$8.00
1980	83,844	$8.00	131,723	$7.00

Human Safety

Along with other state and federal agencies as well as private organizations, FWP has recently taken a proactive approach to help people learn how to live and recreate in wildlife habitats. Increasing numbers of people are living within the urban-wildland interface where a potential for conflict with a wide variety of wildlife species exists. Outdoor recreation trends also show increasing numbers of people recreating in wildlife habitats where interactions could become more frequent (Youmans 1999). Living and recreating in wildlife habitats has inherent risks. Through policy development, public outreach, and technical assistance to landowners and recreationists, FWP is working towards mitigating those risks to the extent possible.

In accordance with Montana statutes, FWP and the FWP Commission are charged and authorized to protect people and personal property from damage and depredation caused by wildlife. FWP defines a public safety problem related to carnivores as: any situation where an FWP employee reasonably determines that the continued presence of a carnivore poses a threat to human safety, an attack has resulted in the loss of livestock or personal pets, or that a human has been physically injured or killed.

Table 20. Montana Fish, Wildlife & Parks 2000 revenue from major deer and elk license and permits. Source: FWP historical license sale records.

License or Permit Type	Number Sold	Price	Total FWP Revenue (dollars)
Resident - Elk Permit	39,945	$3.00	119,835
Resident - Elk License– Adult	68,826	$16.00	1,101,216
Resident - Elk License Senior or Disabled	16,704	$8.00	133,632
Resident - Deer A License - Adult	88,233	$13.00	1,147,029
Resident - Deer A License - Senior or Disabled	21,709	$6.50	141,109
Resident - Deer B Permit	40,592	$8.00	324,736
Resident Total Fees			2,967,557
Nonresident- Drawing Fee	196,759	$3.00	590,277
Nonresident - Big Game Combo -General	10,715	$475.00	5,089,625
Nonresident - Big Game Combo – Outfitter	5,606	$975.00	5,465,850
Nonresident - Deer Combo - General	2,300	$245.00	563,500
Nonresident - Deer Combo - Outfitter	2,304	$850.00	1,958,400
Nonresident - Deer Combo - Landowner	2,000	$250.00	500,000
Nonresident - Elk Combo - General	785	$425.00	333,625
Nonresident - Elk Combo - Outfitter	623	$875.00	545,125
Nonresident Total Fees			15,046,402
Total of Resident and Nonresident Fee Revenue			18,013,959

Wolf-human Encounters

Public safety is an important consideration because species such as the gray wolf, mountain lion, black or grizzly bears are capable of injuring or potentially killing a person. It is also possible for a rabies-infected wolf to transmit the disease to humans. Though wolves generally fear humans, there are cases where individual wolves lost their fear of people and caused injuries, but no human fatalities have been reported in North America (Mech 1998a, Route 1999). Historically, human fatalities were reported in Old World Europe prior to white settlement of the New World. Rabies is thought to have been a factor (Paradiso and Nowak 1982). McNay (2002) provides a comprehensive review of case histories of 80 incidents of wolf-human interactions in Alaska and Canada, spanning from 1900 through 2001. It appears most wolf-human encounters were not precipitated by the wolf perceiving the human as prey because of how the wolves behaved, the presence of domestic dogs, or the duration and type of interactions between wolves and humans leading up to the incident (Mech 1998a, McNay 2002a, Carnes and Van Ballenberghe unpubl.). Instead, wolves losing a sense of fear of humans seems to be a common thread running through most North American wolf incidents resulting in human injury (Mech 1998a, McNay 2002b). Of the 80

cases reviewed by McNay (2002b), 39 included elements of aggressive behavior by healthy wolves, 29 were not aggressive, and 12 cases involved known or suspected rapid wolves. Of the 16 cases in which healthy wild wolves bit people or their clothing, 10 of 16 resulted in minor injuries while six were considered severe. Linnell et al. (2002) also provided a review of wolf attacks on humans. The authors conclude that there have been relatively few wolf attacks in North America. This is in stark contrast to the case histories of mountain lion-human incidents in which mountain lions sometimes appear to perceive humans as prey (Deurbrouck and Miller 2001). Case studies of injurious bear-human incidents highlight surprise encounters, defense of cubs or food, and/or the bear perceiving the human as a threat to be neutralized (Herrero 1985).

The potential for wolves to transmit rabies to humans deserves special mention in the context of human safety. Information for this section is taken from Linnell et al. (2002). Rabies, a viral infection of the central nervous system, is usually transmitted by a bite. While the disease is highly infectious, not all bites from a rabid animal actually transmit the disease. Immediate post exposure vaccination can prevent the disease from becoming established in most cases. Disease transmitted by bites to the head and face is usually not responsive to post-exposure treatment. The primary source of rabies infection in humans is by domestic dog bites. However, in Europe, Asia and to a much lesser extent North America, rabies does occur in wild wolves as primarily isolated incidents in which a single animal or a pack become infected from exposure to a carrier such as red or arctic fox. Linnell et al. (2002) report that the number of rabies cases in North American wolf populations is low despite the relatively large population in northern latitudes. Despite the low frequency, when wolves do become infected, it appears that the disease progresses to the "furious" stage with some degree of regularity. This stage of the disease is usually accompanied with excessive salvation and bouts of hyperexcitability in which a wolf can travel widely. These are the cases in which wolf behavior can become especially aggressive towards humans, other animals, and domestic livestock. All cases of known confirmed rabies in North America were documented in Canada and Alaska. See Linnell et al. (2002) for a thorough review and occurrence reports across Eurasia and North America.

It appears that wolves can habituate to humans or human activities as readily as bears or mountain lions (Aune 1991, McNay 2002b). Habituation in wolves may not require a consistent pattern of food conditioning, as is often the case for bears. Wolves may increasingly tolerate or even seek out close proximity with people through repeated social interaction with people and where they are "rewarded" in some fashion, whether by acquiring food or novelty items such as shoes. While some time may be required for a wolf to habituate to human proximity, some case histories suggest that it can occur within days of the first encounter (McNay 2002b). Other important variables are whether or not there are food rewards, the frequency of interaction, the individual character of each wolf, the presence of domestic dogs, and whether the wolf is infected with rabies. McNay (2002a) cautioned that the transition from non-aggressive behavior to aggressive behavior in habituated wolves could be rapid and unpredictable. Whether or not habituation escalates to an immediate threat to human safety may hinge on a prompt management response by the appropriate authorities.

Surprise encounters between wolves and humans may also occur (McNay 2002b). In Montana, hikers have unknowingly encountered an occupied den site and wolves responded by barking. Other encounters occurred away from wolf den sites and ended when the wolf retreated, without injury to human or pet. Reported wolf behavior in these cases was consistent with other case histories reviewed by McNay (2002b). Since the mid-1980s, the only two injuries to humans by wolves in Montana occurred when wolf researchers and managers handled unrestrained animals during capture operations. However, there have been eight mountain lion-human incidents in Montana from 1990-1999 in which seven people were injured and a young boy was killed (FWP unpubl. data). In all of these encounters, the human was not aware of the lion.

Wolves have injured and killed domestic pets, primarily dogs and llamas in Montana. Most incidents involved guarding or livestock herding dogs, although in some instances, the dog was killed in close proximity to a structure or outbuilding. Other cases of dog depredations were of hunting hounds trailing mountain lion or bobcat scent. Hounds do not typically switch scent trails from felids to canids, but may encounter wolves while pursuing wild cats or at lion kills assumed by wolves. Bangs and Shivik (2001) also noted that wolves probably perceived hunting hounds and guarding/herding dogs as "trespassing" competitors rather than as prey.

A recent review of wolf attacks on dogs in Finland suggested that wolves could attack domestic dogs either within the context of territorial defense or food acquisition (Kojola and Kuittinen 2002). Territorial defense was most plausible in forested settings and often involved more than one wolf. In most instances, wolves ate the dog upon its death. There are no methods to prevent wolf predation on domestic dogs in hunting situations in which its owner does not directly supervise the dog. Food acquisition was more consistent with single wolves attacking dogs in rural house yards. Preliminary evidence indicated that risk of wolf attacks on dogs might be associated with density of natural prey and the predation efficiency of individual wolves or packs.

Despite their general wariness of people, wolves will use natural habitats in close proximity to humans and may sometimes approach very close to buildings or structures. This is particularly true in northwestern Montana where people build their homes in thick, forested habitats. Members of the Murphy Lake pack are occasionally seen within 100 yards of homes and in rare instances closer. While this pack is clearly accustomed to human activity within its home range, its members have shared the landscape with people for about 10 years without a human-wolf incident. As wolves disperse from established packs occupy more habitat in Montana, they will be seen more and more frequently. Some of those observations will be close to human development, particularly if wild prey species are in the area.

Because wolves live in social groups, people may see them more frequently than other large carnivores, although wolves are not necessarily any more dangerous. Mountain lions and bears are solitary, except for mothers with dependent young or during the breeding season. Wolves are much less secretive than mountain lions. Wolves may feed and rest in open areas with good visibility, whereas lions tend to hide their kills and feed or rest in dense vegetative cover. Wolves will also readily travel across openings in forest cover or natural meadows in ways that mountain lions or bears do not. In addition, wolves use linear corridors such as roads, utility lines or railroad rights-of-way for traveling and scent marking. Because of the differences between the secretive stalking behavior of mountain lions and the broad, open searching behavior of wolves, people probably have a greater, yet still remote, chance of an unexpected close encounter with a mountain lion than with a wolf.

The natural order of existence for wolves in the wild is to belong to a pack. With pack membership come "duties", such as establishment and maintenance of social hierarchies, patrolling and marking territory boundaries, hunting, feeding and tending pups, resting, and interacting with other wolves or wildlife species. Wolves affiliated with a pack are usually actively engaged in a "purpose" and do not spend extended periods of time loitering in any one location, particularly near humans. One exception is extended presence and activity at den or rendezvous sites. When pack-affiliated wolves are seen alone, it is usually sporadic travel for a particular reason. Even dispersing wolves generally do not loiter and move through areas near people. In contrast, a single wolf seen repeatedly loitering in an area near people and does not appear to be affiliated with a pack can become habituated, food conditioned, depredate livestock or domestic pets, or otherwise interact with people at decreasingly safe distances. If this pattern is allowed to continue, the wolf may become a safety concern. This will become especially evident if the animal does not respond to hazing or harassment and repeatedly returns to an area.

Wolf Monitoring

Presently, USFWS and its cooperative partners conduct all wolf monitoring. University students and faculty, individual citizens, private organizations, or other state and federal agency personnel collect additional information about wolves. While the focus of the current USFWS monitoring program is the documentation of breeding pairs that meet the recovery definition criteria, additional knowledge is gained in the process. Generally, most prey population monitoring is conducted by FWP, although cooperative efforts involve universities and other agencies.

Using telemetry as the primary monitoring tool, USFWS documents overall wolf population status and trend by recording reproduction and known mortalities. USFWS also generates information about wolf pack size and distribution, individual territory boundaries, how packs move through and use their territories, locations of wolf dens and rendezvous sites, and interactions between packs. USFWS documents known wolf dispersal events between and among the three federal recovery areas and Canada. USFWS has also been investigating non-telemetry based monitoring protocols, such as track surveys, to assess the validity of less stringent definitions of "breeding pair" than the recovery definition. Special management needs, opportunities, and constraints have also been identified.

USFWS collects information through observational reports of wolves and wolf sign (tracks, scat) submitted by citizens and resource management agency personnel. Repeated observations of animals and/or sign in an area often leads to the discovery of new packs and confirms pack persistence through time. USFWS also collects information through track counts, howling surveys to confirm presence/absence, and data profiling of genetic material. Anecdotal information supplements formal monitoring protocols, including depredation investigations by WS that document wolf activity in a new area or the number of wolves in a pack.

For the first five years after the gray wolf is delisted, FWP will be required to document that the wolf population is secure within Montana. FWP, USFWS, and state officials in Idaho and Wyoming will work cooperatively to design the protocols and the precise monitoring requirements prior to delisting. Periodic review of these data by FWP and similar agencies in Idaho, Wyoming, and other cooperators, will be necessary to ensure that the tri-state population remains above the northern Rockies recovery levels. FWP recognizes that beyond its legal requirement for population monitoring, FWP will improve management of wolves and native prey by collecting scientifically credible information. Radio collars deployed by USFWS may still be functioning when the state assumes management authority. FWP expects to have some reliance on telemetry-based monitoring protocols initially, but like USFWS, FWP could also investigate other, less expensive protocols or definitions of what constitutes a pack. For instance, unpublished USFWS data indicate that there is a strong correlation between the number of breeding pairs meeting the federal recovery definition and the number of "social groups" of wolves, if social group is defined more generally to mean four or more wolves traveling in winter. The monitoring intensity and expense required to monitor social groups would likely be less than the intensity of monitoring the number of breeding pairs, yet the reliability and accuracy of the data may be adequate. USFWS and FWP are currently exploring these relationships.

Private Property

FWP has authority to manage wildlife over approximately 88.3 million acres, or roughly 93% of the state (excludes national parks and reservations). Approximately 58.4 million acres of the total is privately owned, hosting a significant wildlife resource which, itself, is "publicly" owned. Much of that land is used for agricultural purposes (crops or livestock grazing). The earliest European settlers brought farming traditions and livestock with them. Montanans have been raising livestock for more than four

generations. Agricultural heritage is woven through Montana's cultural fabric, just like the heritage of wildlife conservation. The rural characteristics of one affirm the other.

Farming and ranching maintains open space that is also habitat for a diversity of wildlife species, including wolves. Maintaining the land base for agriculture and wildlife habitat is an increasing challenge, given broader trends in resource and agricultural economics, human population demographics, and development of the "New West" (Riebsame 1997). There are secondary benefits to a vigorous agricultural industry, including sustained economic activity in small rural communities, decreased rates of land conversion for subdivision and development, and maintenance of rural lifestyles.

Most Montana landowners are interested in, proud of, and enjoy the wildlife associated with their properties, even while acknowledging the challenges posed by wildlife and the occasional conflicts. Some landowners are deferential to wildlife and have a high degree of tolerance for conflict, even promoting wildlife habitat and wildlife use of their lands. In some cases, wolves in particular are welcomed. But history has demonstrated that wolf presence can create problems for landowners trying to raise livestock. Financial losses may result directly from wolf depredation. Indirect costs may accumulate because of increased management activities or changes to agricultural operations. These financial hardships accrue to individual farmers and ranchers and may be significant to them. What makes wolf-livestock conflicts unique from other wildlife-livestock conflicts are the changes in the legal status of wolves through time. Historically, farmers and ranchers had the latitude to take care of problem wolves themselves. Since 1973, wolves have been legally protected by ESA and state law. Livestock owners have had limited flexibility to protect their private property.

Regardless of historical events and how present circumstances evolved, tolerance for wolves on private property has been fundamental to the overall success of the federal wolf recovery program. This is highlighted by Montana's patchwork of public and private lands and how wolves have distributed themselves. During the state's scoping process for this EIS, wolf presence on private property and how wolf-livestock conflicts would be resolved (in the context of livestock being private property) were also raised.

Hybrids

Hybrids result from the breeding of *Canis lupus* with domestic dogs (*C. familiaris*), resulting in variable combinations of physical traits and behaviors. Much of the normal predatory behaviors of wild wolves disappeared in domestic dogs. But the predatory instincts are still present to an unknown and unpredictable degree in wolf-dog hybrids. Although hybrids commonly lack a fear of humans, the animals are generally poorly adapted as domestic pets because their behavior is unpredictable and their response to general obedience training is poor. While the keeping of captive wolves and hybrids as pets is rewarding to some individuals, others find it unmanageable and try to find new homes for their pets. Hybrids have been released into the wild and others apparently escaped from their owners. The potential for genetic pollution of wild populations, human safety issues, and erosion of public acceptance for wild wolves are commonly cited problems with private ownership of captives or hybrids and release of these animals in the wild.

Methods to distinguish non-native wolf-like canids from native wild wolves in the northern Rockies include a combination of genetic analyses, morphology, and behavior (Boyd et al. 2001). At present, there is no genetic or other evidence that captive wolves, wolf-dog hybrids, domestic dogs, and coyotes interbred with native Rocky Mountain wolves in the wild (Boyd et al. 2001). Wolves and coyotes can be easily differentiated genetically. However, current genetic tests cannot distinguish between wild wolves, domestic dogs, and wolf-dog hybrids. Because domestic dogs evolved from wild wolves, they have

similar genetic characteristics. It is unlikely, however, that a released captive or wolf-dog hybrid would survive long enough to reproduce with wild wolves (Bangs et al.1998). The concern about genetic pollution in the northern Rockies population is overstated.

There are behavioral differences between wild wolves, wolf-dog hybrids, and captive wolves. These differences provide important clues to managers in situations where the origin of the animal is not known. Released captives and hybrids will typically associate with humans and loiter near human settlements for periods of time that are much longer than expected compared to a wild wolf traveling through an area. They may even be more likely to depredate domestic animals than wild wolves (Bangs et al. 1998). In the tri-state area, wolf-dog hybrids have been found in the wild sporadically since at least 1986 (Bangs et al. 1998). Two cases in 1997 were south of YNP. In each case the animal loitered on private property, scavenged, and one killed domestic sheep. Both animals were euthanized. Two cases that were reported in northwestern Montana in 2002 had similar case histories (Meier pers. comm.).

Across the U.S., wolf-dog hybrids have been responsible for human attacks, maulings, dismemberments, and deaths. Many incidents involved children. The animal's large size, lack of fear, and unpredictable behavior make it especially problematic. As of 1997, the Food and Drug Administration had not approved rabies or other vaccines for use with captive wolves or hybrids. Despite lack of approved vaccines, many captive wolf or hybrid owners use the standard dog rabies vaccine. Nonetheless, there is still concern for public safety.

It is legal to possess captive wolves and wolf-dog hybrids in Montana. Citizens may keep them as personal, private pets without a permit. Citizens wishing to publicly display captives or wolf-dog hybrids or to attract trade must have a permit from FWP. Montana statutes (87-1-231) and administrative rules require the permanent tattooing of any wolf held in captivity, where "wolf" means a member of the species *Canis lupus*, including any canine hybrid, which is $\geq$ 50% wolf. Owners are also responsible for compensation and damages to personal property caused by any wolf that is held in captivity or that escapes from captivity.

Cultural, Archaeological, and Historical Resources

Evidence of about 12,000 years of human occupation of the Montana landscape is divided into prehistoric archaeological sites (such as stone circles, lithic scatters, or bison kill sites) and historical sites (such as homesteads or railroad depots). Although documentation suggests preferred areas of use and occupation, no environmental/topographic zone can be ignored as having potential for containing cultural resources. The value of cultural resources lies in its potential to provide information about societies past. The gray wolf attained a cultural significance to many Native American tribes. The wolf recovery areas contain lands that the tribes used traditionally and continue to do so today.

FWP's Parks Division is responsible for preserving and managing important historical and cultural resources that are incorporated within the state parks system. Examples are Ulm Pishkun, Bannock, Chief Plenty Coups, and Traveller's Rest.

Physical Environment

Air

Air provides for the exchange of gases basic to life, whether plant or animal.

Soil

Soil is a basic natural resource essential for plant growth and animal survival. Rich, healthy soil supplies nutrients for vegetation upon which wildlife depend for food and cover. Montana has a diverse landscape of soils, varying with geological parent material, climate, vegetation, rates of weathering, and human manipulation such as logging, mining, and agriculture. Human manipulation affects soils through compaction, erosion, and changes in chemical composition including accumulation of toxic chemicals.

Aquatics / Water Quality / Fisheries

Montana is dissected by 178,896 miles of streams and contains more than 10,000 lakes, reservoirs, and ponds for a total of 979,433 acres of water surface. Groundwater is important for agriculture, commercial industries, municipal and rural residential purposes. Surface water is valuable for wildlife and recreation. Wetlands are areas where water saturation is the dominant factor influencing soil, plants, and animal communities (Cowardin et al. 1979). Wetlands are important riparian ecosystems in the regulation and maintenance of rivers, lakes and groundwater systems. They also maintain water quality and improve degraded water by assimilating nutrients, reducing sediment load, and processing some chemical and organic waste. Wetlands and riparian areas are the most biologically productive ecosystems, and are particularly critical to maintain a diversity of wildlife. Waterfowl, wading birds, and shore birds use wetlands for feeding, nesting, migration, and wintering.

Over 11,000 individual waters support 90 species of fish. Of these, 56 are native to Montana, two others are possible natives, and the rest were introduced. Thirty-one species are classified as game fish under Montana statutes. Eighteen species are listed as “species of special concern”, two are listed as federally endangered, and one is federally threatened. Several other species are candidate species for listing under ESA. Fishing is a popular pastime. About 34% of all residents purchase fishing licenses annually.

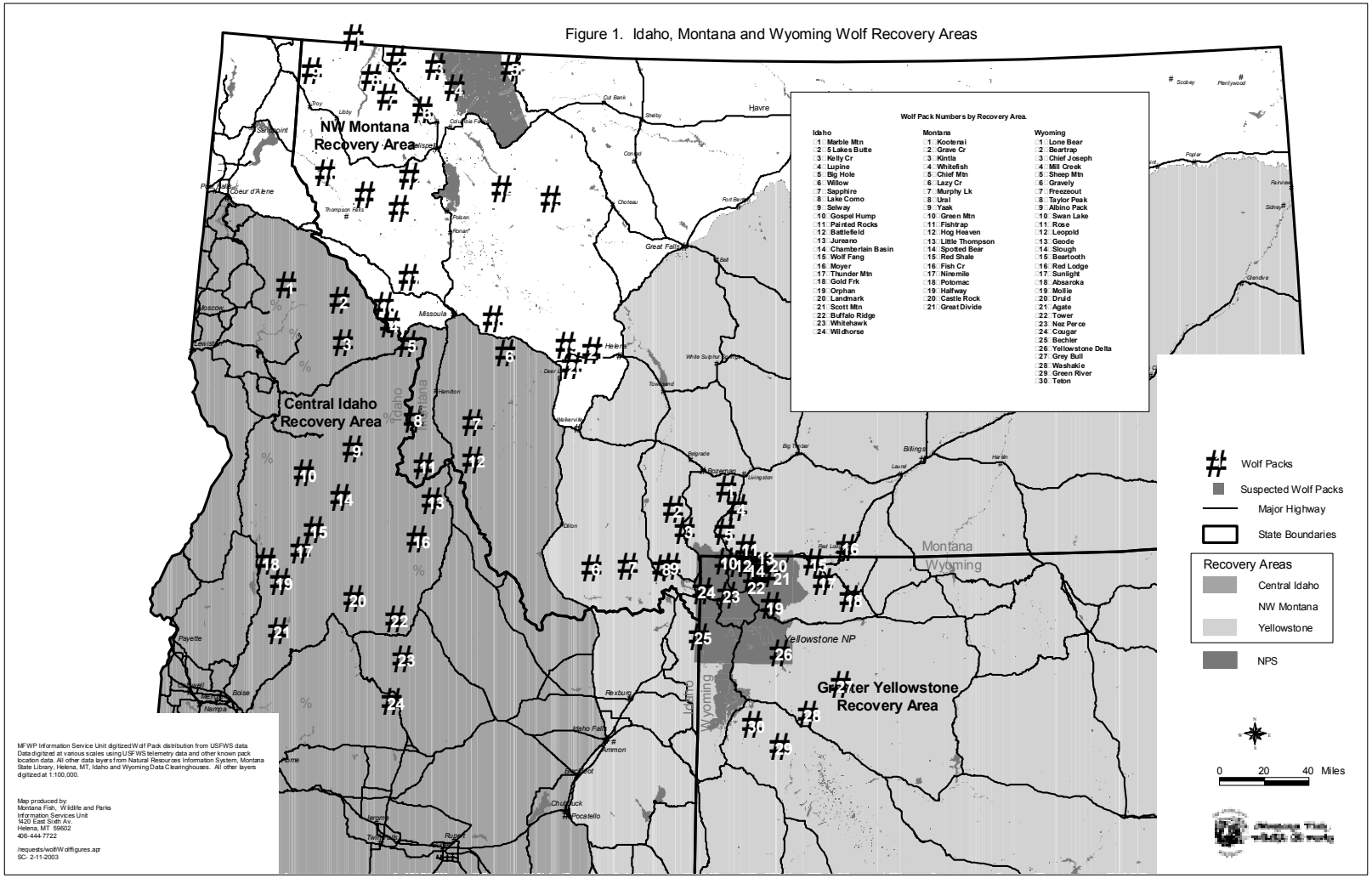

Figure 1. Wolf pack distribution in Montana, Idaho, and Wyoming, federal recovery area boundaries, and state boundaries (shown in bold). Large symbols represent established packs. Small symbols indicate newly formed packs or packs whose status is unknown at the present time. (Source: USFWS et al. 2002 and USFWS unpubl. data as of February 2003).

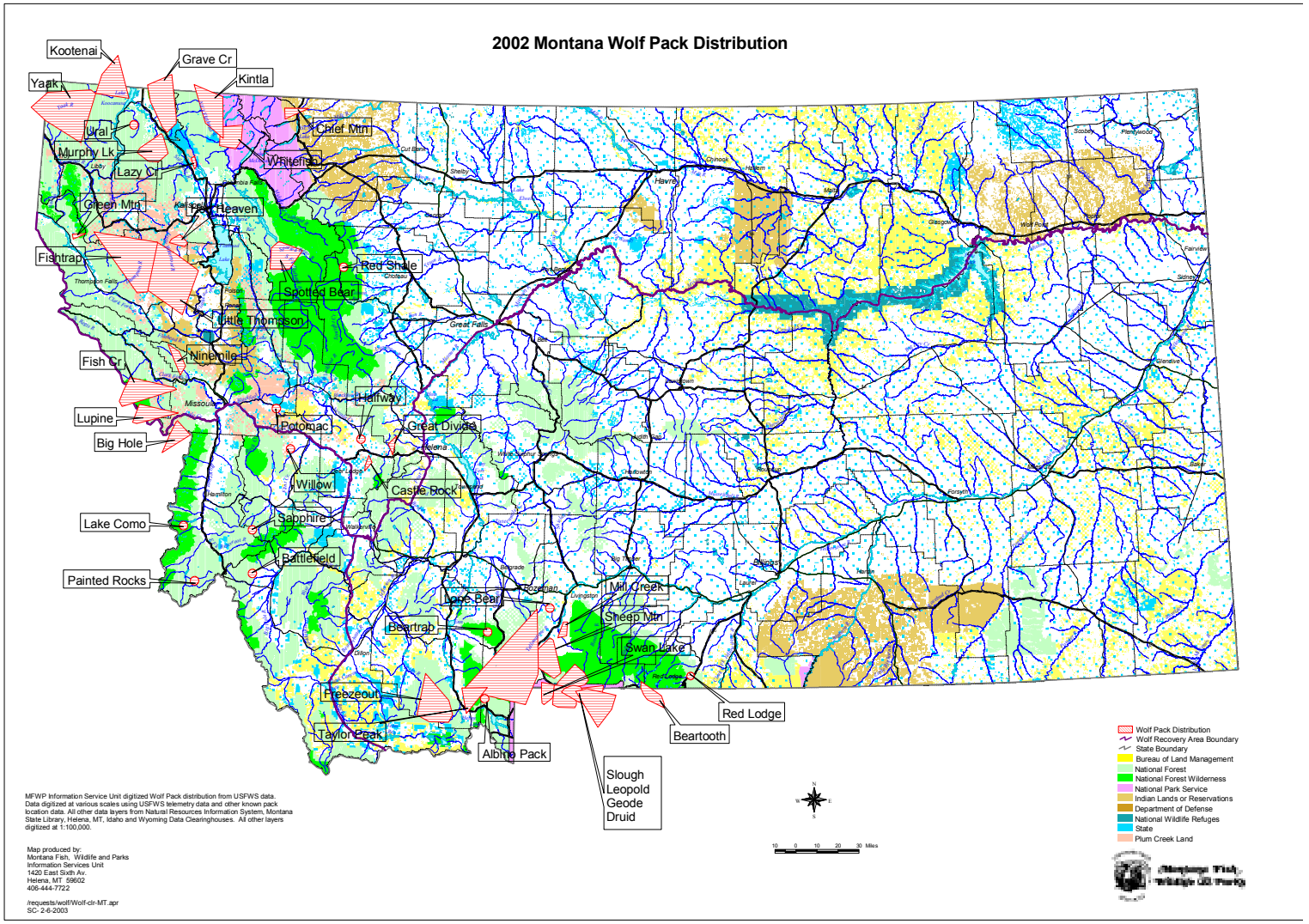

Figure 3. Wolf pack distribution and land ownership patterns in Montana. Approximate wolf pack territories are designated by the polygons with horizontal lines. Gray tones represent public lands and white indicates private lands. (Source: USFWS et al. 2002 and USFWS unpubl. data as of February 2003).

CHAPTER 3: ALTERNATIVES

This chapter describes five alternatives and outlines how each alternative addresses issues identified by the public. FWP's preferred alternative is also described. A summary is included at the end of the chapter (Table 30).

Introduction

FWP initiated this EIS to involve all Montanans and other interested parties in the wolf planning process and to ensure full compliance with MEPA. Because of the significant number of comments taken during the scoping period, FWP consulted with the Wolf Management Advisory Council prior to finalizing the alternatives presented in this EIS. In January 2003, FWP and the council discussed and examined new information and a summary of public comments. The council discussed several new issues that arose during the scoping process, revisited some issues it had previously discussed, and formally endorsed several updates to their original planning document. The updates are incorporated into this document.

Ultimately, FWP crafted a total of five alternatives. One alternative suggests that FWP would not develop and adopt a state wolf management program. Three alternatives, presenting a spectrum of approaches, suggest that FWP should adopt a management program. One of these three is the work of the council. The fifth alternative presents a "contingency," or interim plan that FWP would consider implementing if delisting were delayed. Table 21 summarizes the main scoping issues and indicates which issues were significant enough to drive creation of the alternatives and which issues were treated differently in each alternative.

Table 21. Issues identified by the public (in the order of their frequency), whether or not the issue drove creation of a separate alternative, and whether the issue is treated differently in each alternative.

Scoping Issues, identified in 2002	Drives Creation of Alternatives?	Treated Differently in the Alternatives?
Wolf Management, Numbers, and Distribution	Yes	Yes
Social Factors	Yes	Yes
Administration and Delisting	Yes	Yes
Prey Populations	Yes	Yes
Funding	Yes	Yes
Livestock	Yes, with Compensation	Yes
Wolf Habitat, Connectivity, Land Management	No	Yes
Compensation	Yes, with Livestock	Yes
Economics / Livelihoods	No; overlaps other issues	Yes
Information/Education, Public Outreach	No	Yes
Human Safety	No	No
Monitoring	No	Yes
Other Wildlife	No	No
Private Property	No	Yes
Hybrids	No	No
Wildlife Management Areas	No	Yes
Questions	No	Yes

Alternatives Selected for Analysis

In general terms, most public scoping comments fell along a continuum from highly protectionist philosophies to highly exploitive philosophies. More specifically, input ranged from the need to prevent all wolf mortalities (no matter what the circumstances) to the need to kill or remove all wolves from Montana. This philosophical spectrum represents peoples' values, opinions, and beliefs. These represent the social factors that need to be considered. Four alternatives were crafted to represent that philosophical continuum within the sideboards of the federal requirement for a secure population. The fifth alternative falls within the continuum, but describes a potential interim state program under a different legal context than the other alternatives—namely state management while the gray wolf is in the process of being delisted.

The issues establish a framework for the development of the alternatives. The alternatives could be thought of as the different ways of accomplishing the proposed action. They encompass a range of possibilities and establish clear differences among the alternatives. FWP selected one of the alternatives as its preferred approach, but FWP is not legally required to select that alternative in its final decision. In fact, the decision maker could select any alternative or even combine elements of several alternatives into a new alternative, based on the public comment FWP received on this draft and the results of the environmental review.

During the public comment opportunity in 2003, the public was invited to review the Draft EIS and the alternatives. FWP asked for input on specific elements of the alternatives and for ways in which they could be modified. The Final EIS describes the public comment process for the Draft EIS and provides a sample of representative comments received on the Draft EIS (see Appendix 5). The Final EIS also provides clarification and additional information on FWP's preferred alternative. The ROD will describe FWP's final decision.

The main issues selected for further analysis and which underlie the specific details of the alternatives are: wolf conservation and management, social factors, administration, prey populations, livestock, and compensation. These issues will remain the primary focus for the analysis of environmental consequences (Chapter 4). Because a continuum was also evident for the other issues listed in Table 21, many are also treated differently in each of the alternatives. The five alternatives listed below are described in greater detail in this chapter and summarized in a table at the end of the chapter (Table 30).

1. No Action. FWP does not develop and adopt a wolf conservation and management program.

2. Updated Council. FWP would adopt the Montana's Wolf Management Advisory Council's Planning Document as written and updated by the council in January 2003. Montana's wolf conservation and management program would consist of the original planning document and the updates outlined in this EIS. This is FWP's preferred alternative.

3. Additional Wolf. FWP would adopt the council's updated Planning Document as the conservation and management program, but the number of breeding pairs would be increased. This alternative was developed in response to public comments expressing general support for FWP to manage the gray wolf, but to do so conservatively and with greater numbers of wolves on the landscape.

4. Minimum Wolf. FWP would develop and adopt a wolf conservation and management program that meets the minimum standards and requirements for a secure, viable wolf population, but requires aggressive management to maintain wolf population numbers at the lowest level

acceptable to USFWS and restricts wolf distribution to primarily public lands in western Montana.

5. Contingency. FWP would seek to implement most provisions of Alternative 2 through an agreement with USFWS while the gray wolf was still listed under ESA, in the event that actual delisting is postponed because of delays in state planning efforts or because prolonged litigation blocked transfer of full authority to Montana. This alternative represents an interim step. FWP would be working to accomplish delisting with USFWS, but FWP would begin managing the Montana gray wolf population while the delisting process is completed. Once delisted, FWP would implement the remaining elements of Alternative 2 (Updated Council) that had previously been prohibited by federal regulations.

Alternatives Identified during Scoping, but not Considered Further

1. No gray wolf recovery program in the northern Rockies or individual wolves present in Montana.

This alternative was not considered because it is outside the sideboards established by the Northern Rocky Mountain Wolf Recovery Plan, which calls for a viable, secure wolf population in the states of Montana, Idaho, and Wyoming. The question of whether or not wolves will be present in Montana has been addressed through various legal challenges to the federal recovery program. All litigation has been resolved and wolves will remain. Although there have been previous reports of gray wolves in Montana, wolves began dispersing into northwestern Montana from Canada in the early 1980s and were reintroduced to YNP and central Idaho in the mid 1990s. Removing all wolves from Montana is neither feasible nor legal. Relevant alternatives for this EIS must address the question of *how* gray wolves in Montana will be managed in the future.

2. Delist the gray wolf from ESA, but USFWS retains management responsibility.

The U.S. Congress charges USFWS with the recovery of listed species, and ESA directs USFWS to delist species once recovery criteria are met. There is no legal mechanism or precedent for USFWS to manage a delisted species. Indeed, the opposite is true. The respective state fish and wildlife agencies are the traditional and appropriate entity to manage non-imperiled species--as resident, native wildlife according to state laws and regulations. For USFWS to continue managing the gray wolf in Montana, the species would need to remain listed under ESA, even after recovery criteria are met. This would conflict with USFWS's authority and the legal requirements of ESA to delist species once recovery goals are met.

3. Changes in how USFWS implements the recovery program in Montana. A related alternative could involve changes to ESA.

The states, through their respective fish and wildlife agencies, are encouraged to conserve and manage species so that federal ESA protections are not warranted. However, once a species is listed under ESA, the U.S. Congress invests almost sole authority to oversee recovery efforts with USFWS and their cooperating partners due to the national value associated with recovering rare and imperiled species. In 1995, FWP decided that it would not formally participate as a cooperator in shaping and implementing the recovery program. However, FWP has participated informally through consultation and information exchange since then. FWP continues to informally consult with USFWS, but does not have any decision-making authority in the federal program currently. Modification of ESA is a separate issue and well beyond the scope of the proposed action.

Description of the Alternatives Considered

Alternative 1. No Action

Under this alternative, Montana does not prepare or adopt a state conservation and management plan. Because the state would not develop a plan, USFWS would not propose to delist the gray wolf. Therefore, wolves in Montana would continue to be managed by USFWS. This alternative represents the existing situation.

Implementation of this Alterative

Implementation of this alternative would involve FWP completing this EIS process and signing a Record of Decision indicating that it will not take any further action.

How Does this Alternative Address the Major Issues?

Wolf Management, Numbers and Distribution. USFWS and its cooperating partners carry out all management, monitoring, public outreach, and technical assistance to landowners. Wolves occurring within the Northwestern Montana Recovery Area are currently managed as "threatened" according to recently adopted new federal rules (USFWS 2003a). Wolves occurring elsewhere in Montana are managed as "experimental, non-essential" according to the final rules adopted for the reintroduction effort (USFWS 1994a).

USFWS decision-making is guided by ESA, the Northern Rockies Wolf Recovery Plan (USFWS 1987) and its amendments, the Northwestern Montana and Central Idaho Interim Wolf Control Plan (USFWS 1999), new rules pertaining to managing "threatened" wolves in northwest Montana (USFWS 2003a) the Final EIS on Reintroductions of Gray Wolves to YNP and Central Idaho, and the experimental rules (USFWS 1994a). The USFWS could adopt or amend management policies or regulations at any time in the future, so long as the changes were consistent with ESA requirements to recover the species and the proper administrative and procedural steps are followed. In 2000, USFWS proposed to reclassify wolves in northwestern Montana from "endangered" to "threatened" and to implement new rules that increase management flexibility for the agencies and landowners (USFWS 2000). USFWS formally adopted those new rules in the spring of 2003 after FWP released its Draft EIS. See USFWS (2003) for a detailed description of those rules. Some details, as they relate to the issues, are discussed below.

Wolf management on behalf of other interests is somewhat limited under the existing federal recovery program. The primary focus of the federal program is on recovery of the species—increase wolf numbers and distribution so that protection under ESA is not longer warranted. USFWS may or may not be able to address certain issues, depending on the legality or consistency with existing federal regulations. The federal program emphasizes conflict resolution for livestock and human safety concerns rather than proactive management of wolf abundance or distribution per se. USFWS has somewhat limited management flexibility under ESA.

Social Factors. This alternative represents the most conservative because federal law and regulations, most notably ESA, guide the program not state laws. This alternative was created to most closely reflect public comments that expressed protectionist philosophies, a distrust of state wildlife agencies, and that supported permanent protection of the gray wolf under ESA. Ironically, this alternative also reflects some public comments that did not support the State of Montana developing a program because wolf management would then stay with USFWS, the agency "responsible for creating a problem for Montana residents."

Administration, Delisting. USFWS would not propose to delist the gray wolf in the northern Rockies in the absence of conservation and management plans from Montana, Idaho and Wyoming. Therefore, the species remains listed and managed by USFWS and the cooperating partners in all aspects. The State of Montana would not be involved in day to day management activities.

Under the Montana Endangered Species Protection Act, the gray wolf would still remain listed as "threatened" or "non-essential, experimental" throughout Montana because SB163 would not take effect. FWP will still have some obligations under the state law to assist the federal recovery effort under Montana's ESA Section 6 agreement to conserve threatened and endangered species. The State of Montana will still informally consult with USFWS, but the state would not participate in decision-making.

Prey Populations. USFWS would not carry out any particular management on behalf of prey populations, but the agency acknowledges that wolf predation can influence prey population abundance or distribution, particularly in conjunction with other environmental factors or concurrent with human hunting. FWP would continue managing ungulates subject to existing plans and policies.

In 2000, USFWS proposed new regulations to allow a state or tribe to capture and translocate wolves to other areas because of adverse impacts to wild ungulate populations after preparation of an approved state wolf management plan. Those new rules were finalized and adopted in 2003. State plans must define impacts, describe how they will be measured, and identify possible mitigation measures. Before any management activities occur, USFWS has to approve the plan and conclude that such translocations would not slow wolf population growth. Presently, a Montana wolf management plan has not been adopted or submitted to USFWS for approval. Under this alternative, none would be prepared in the foreseeable future, so capture and translocation of wolves to other areas because of impacts to ungulate populations could not occur.

Funding. USFWS wolf recovery program in the northern Rockies is funded through the U.S. Congressional budgeting and appropriations process. FWP occasionally consults informally with USFWS as needed. The current FWP budget will cover the administrative costs of ongoing informal coordination (up to $5,000).

Livestock / Compensation. USFWS and WS respond to and resolve wolf-livestock complaints according to existing federal regulations. Recent rule changes provide more flexibility for federal officials and private landowners to resolve conflicts in northwestern Montana (USFWS 2003a). Federal officials attempt to resolve conflicts as quickly and efficiently as possible by focusing on the offending individual/s. Management tools include technical assistance to reduce the conflict potential, telemetry-based monitoring, non-lethal hazing devices (or munitions by permit), relocation, and lethal control.

For as long as the gray wolf is listed, citizens' actions are also constrained by federal regulations, so they need to be cautious because slightly different rules apply in the three federal recovery areas overlapping Montana's state borders (Figure 1). In the Northwestern Montana Recovery Area, wolves are now classified as "threatened" under ESA. Private citizens are able to injure or kill wolves caught "in the act" of biting, wounding or killing livestock, herding, or guard animals, or domestic dogs on private lands. Citizens could also obtain a permit to shoot a problem wolf on private land if the private property owner, or adjacent private landowner, has had at least two separate confirmed depredations by wolves on livestock or dogs, and USFWS determined that wolves are routinely present and present a significant risk to livestock. On public lands, private citizens could get a permit to kill a wolf "in the act" of attacking livestock or herding or guard animals on federal lands after USFWS or WS confirmed that wolves have previously wounded or killed livestock and agency efforts to resolve the problem have been terminated. This permit would not be issued in response to attacks on domestic dogs unless they are livestock herding

or guarding dogs. In addition, citizens could scare a wolf by yelling, shooting a gun in the air or driving a vehicle near a wolf (noninjurious opportunistic harassment), but the wolf can not be injured or killed in the process and the citizen must not take pre-meditated actions. A citizen could also obtain a permit for shooting rubber bullets or bean bags at wolves after persistent wolf activity is confirmed (non-lethal intentional harassment), but the permit does not allow the wolf to be mortally wounded and/or killed. All incidents must still be reported to USFWS. Citizens in the Northwest Montana Recovery Area may also call USFWS or WS for assistance at any time.

Elsewhere in Montana outside the Northwest Montana Recovery Area, landowners are able to harass wolves in an opportunistic, non-injurious manner on leases or private property, but producers must report it to USFWS within seven days. Also, a landowner could lawfully injure or kill a wolf caught injuring or killing livestock on private property, but the incident must be reported within 24 hours. In some circumstances, USFWS issues special permits to individual landowners or their agents to kill a wolf, in lieu of a USFWS or WS control action when agency control actions have been ineffective. These permits have strict provisions and conditions under which they could be issued to and exercised by a landowner.

Defenders of Wildlife recognized that a compensation program could help shift the economic liability of wolf restoration away from livestock producers who may be directly affected by wolf-caused losses. Established in 1987, the fund is administered and financed independently from USFWS or WS activities. Upon receiving the report of a WS field investigation, a Defenders of Wildlife representative negotiates directly with the livestock owner to determine compensation. Through the Bailey Wildlife Foundation Proactive Carnivore Conservation Fund, Defenders of Wildlife also cost-shares proactive, preventative management activities, such as installing electric fencing, building a night pen, or increasing the number of guarding animals. The compensation program is intended to assist in the recovery efforts of listed species. Defenders of Wildlife will presumably continue providing compensation payments and cost-sharing preventative management tools so long as the gray wolf remains listed. However, these efforts are voluntary and sustained by private donations. Recently, Defenders of Wildlife has been exploring new ideas and approaches to its compensation program that would incorporate concepts from the insurance industry, the idea that a local community can benefit from the presence of wolves, and the need to address economic losses due to depredation.

Wolf Habitat, Connectivity, and Land Management. The gray wolf is a habitat generalist and can survive where there is adequate prey and legal protection from indiscriminant killing by humans. The federal program emphasizes public lands where the potential for conflict is lower, but USFWS acknowledges that wolves can and do use private lands. Connectivity of wolf packs is assured by the legal protections of ESA, a relatively high reproductive rate, and dispersal between and among the three recovery areas. Designating critical habitat or specific corridors was not necessary for wolf recovery in the northern Rockies. Outside national parks, there are few travel restrictions or area closures on public lands specifically for wolves. YNP and GNP both enacted temporary area closures around den sites vulnerable to excessive disturbance by humans.

Economics / Livelihoods. USFWS recovery program has avoided disrupting land management activities such as logging that may be harmful to local economies and people's livelihoods. USFWS has also tried to address wolf-livestock conflicts rapidly and efficiently in recognition of the disproportionate effect wolves may have on some operators. Changes in big game hunting activity and resultant economic effects on outfitters are primarily a state issue because FWP manages ungulate populations and a state board oversees the outfitting industry. USFWS recognizes that wolf recovery in the northern Rockies benefits other economic sectors and commercial activity because of the increased tourism and visitation associated with wolf viewing.

Information / Public Outreach. USFWS and their cooperating partners prepare an annual report for the Northern Rockies Recovery Program. Weekly updates are widely distributed electronically and posted on the USFWS web site throughout the year. Technical assistance is provided to landowners and others. Presentations are made to civic groups and in educational settings. In addition, private entities and non-profit organizations help fulfill public educational needs.

Human Safety. A person can legally injure or kill a wolf in response to an immediate threat to human life anywhere in Montana. The action must be reported to USFWS within 24 hours. Newly adopted rules in the Northwest Montana Recovery Area allow a person to opportunistically harass a wolf without injuring it when trying to scare it away from people, domestic dogs or livestock (non-injurious opportunistic harassment). With a permit, a person can use rubber bullets or bean bags to harass wolves near people, dogs, or livestock on public or private land. A citizen may kill a wolf "in the act" of attacking domestic dogs on private lands only. A person cannot kill a wolf "in the act" of attacking non livestock herding or livestock guarding dogs on public lands, but a citizen could scare or harass the wolf non-injuriously. There are no changes to the existing rules guiding citizen actions in the experimental, non-essential area. The reader is referred to USFWS (2003) for specific language on the newly adopted federal rules for the Northwest Montana Recovery Area and a review of the rules in the experimental, non-essential area.

Monitoring. The goal of the federal monitoring program is to measure progress towards recovery, such as documenting breeding pairs and counting pups, confirming pack persistence or new pack formation, delineating pack territories, etc. Radio telemetry is an important, but expensive monitoring tool. Other information is gathered from public reports of tracks, sightings, or sign. WS field activities also yield important information and contribute to the monitoring program. How intensively USFWS would continue to monitor a recovered, but still listed wolf population in the Northern Rockies is unclear. Any effort beyond documenting that the minimum recovery goal is met could be subject to USFWS budget priorities.

Other Wildlife. Wolves are an important link in the food chain and probably are important for ecosystem functioning. No special management provisions exist for other wildlife species per se. Prior to implementing any recovery program, USFWS completes an internal review to assess the impacts of recovery on any other ESA-listed species. FWP could address any special needs of non-listed species if it becomes necessary.

Private Property. Although the federal program concentrated recovery efforts on public lands, the gray wolf is a wide-ranging carnivore capable of long distance movements. USFWS acknowledges that wolves will use private property. In addition, USFWS acknowledges that wolves can injure or kill livestock, a type of private property damage. Aspects of the program address that damage (see *Livestock / Compensation* issue above). Private property uses are not restricted.

Hybrids. Gray wolf-dog hybrids or captive wolves do not contribute to the federal recovery program in the northern Rockies and are not protected by ESA. In response to reports of large canids near people, USFWS establishes whether or not the animal is a wild wolf. If it is not a wild wolf, USFWS defers to local or state authorities to resolve the problem. State law assigns regulatory oversight of hybrid or captive wolf ownership to FWP. Federal and state laws prohibit removing wolf pups from the wild.

Wildlife Management Areas. There are no special provisions in the federal program governing wolf occupancy or use of FWP WMAs. WS would investigate wolf-livestock conflicts on WMAs similar to investigations elsewhere.

Alternative 2. Updated Council – *FWP's Preferred Alternative*

Under this alternative, FWP adopts and implements the Montana Wolf Management Advisory Council's Wolf Conservation and Management Planning Document and the updates to the document described in this EIS. This document suggests that FWP recognize and accept the challenges, responsibilities, and benefits of a restored wolf population. It also acknowledges that wolf management will not be easy, but that wolf restoration is fundamentally consistent with Montana's history of wildlife restoration and conservation. The planning document also describes a spectrum of management activities that maintain viable populations of wolves and their prey, resolve wolf-livestock conflicts, and assure human safety. The management philosophies and tools are intended to assure the long-term persistence of wolves in Montana by carefully balancing the complex biological, social, economic, and political aspects of wolf management. The Planning Document is presented in its entirety as Appendix 1. How the planning document and subsequent council updates address each of the scoping issues are summarized below.

Upon federal delisting, provisions of SB163 take effect and wolves would automatically be reclassified under state law from "endangered" to a "species in need of management." This statutory classification confers full legal protection under state law.

Implementation of this Alternative

Implementation of this alternative is contingent on securing adequate funding for each of the program elements. Implementation also requires FWP to develop and adopt final administrative rules and regulations under the "species in need of management" designation. This alternative represents FWP's proposed management direction, rules, and regulations. The FWP Commission may then approve and adopt the administrative rules and regulations, including any special language pertaining to wolf management or how FWP would interpret relevant state laws. This alternative would form the basis of those administrative rules and regulations. Future FWP Commission action could reclassify the gray wolf as a big game animal or a furbearer when it becomes appropriate to do so. The FWP Commission would concurrently establish regulations pertaining to management and regulated harvest under the new species designation. The Montana Legislature would establish a wolf license for regulated public harvest, the license fee, penalties for illegal take, and the restitution value. MOUs must also be finalized with MDOL and WS. FWP may seek to develop MOU's or cooperative agreements with Indian tribes to coordinate management and clarify roles and responsibilities.

How Does this Alternative Address the Major Issues?

Wolf Management, Numbers and Distribution. FWP recognizes the gray wolf as a native species and will integrate wolves as a valuable part of Montana's wildlife heritage. Wolves will be integrated and sustained in suitable habitats within complex management settings. The wolf program will be based on principles of adaptive management (Table 22). Management strategies and conflict resolution tools will be more conservative as the number of breeding pairs decreases, approaching the legal minimum. In contrast, management strategies become more liberal as the number of breeding pairs increases. Ultimately, the status of the wolf population itself identifies the appropriate management strategies. A minimum of 15 breeding pairs, according to the federal recovery definition (an adult male and an adult female with at least two pups on December 31) will be used as a signal to transition to more liberal or conservative management tools, whichever the case may be. This adaptive management trigger is not intended to be a minimum or maximum number of wolves "allowed" in Montana. FWP does not administratively declare an upper limit or maximum number of individuals of any wildlife species in the state in the sense of a "cap." Instead, FWP identifies population objectives that are based on landowner tolerance, habitat conditions, social factors, and biological considerations. Wildlife populations are then managed according to the objectives and current population status, using an array management tools. An

adaptive approach will help FWP implement its wolf program over the range of social acceptance values. Sensitivity towards the challenges of wolf presence and prompt resolution of conflict where and when it develops is an important condition of not administratively capping wolf numbers or defining distribution.

Table 22. The spectrum of management activities to manage and conserve wolves in Montana. The adaptive management model calls for selection of different management strategies as the number of breeding pairs (according to the federal recovery definition) changes from 10-15 to greater than 15. The model also calls for different strategies, depending on landownership patterns (Public Lands and Mixed Land Ownerships), social factors, land use patterns, biological constraints, and the physical attributes of the environment. Some management strategies may apply across all numbers of breeding pairs or management settings, as indicated by the arrows.

	10-15 Breeding Pairs* ← | → **Greater than 15 Breeding Pairs ***			
	Public Lands *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*	**Public Lands** *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*
Montana Fish, Wildlife & Parks	Adaptive management →	→	→	→
	Integrate with ungulate management →	→	→	→
	Health and disease surveillance →	→	→	→
	Population monitoring	Enhanced population monitoring	Limited monitoring to determine pack status	Enhanced monitoring in selected areas
	Research to improve ecological understanding of wolf-ungulate interactions →	→	→	→
	Research to evaluate specific management actions →	→	→	→
	Law enforcement, high priority →	→	Law enforcement standard activity	→
	Public outreach to inform and address specific needs →	→	→	→

Table 22. Continued.

	10-15 Breeding Pairs* ← | → Greater than 15 Breeding Pairs *			
	Public Lands *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*	**Public Lands** *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*
Montana Fish Wildlife & Parks (continued)	Interagency, tri-state, tribal coordination	→	→	→
	Summarize annual mortality; track breeding pairs numbers using USFWS definition	→	Summarize annual mortality; track pack numbers using combination USFWS definition and other techniques	→
	Ensure human safety; discourage wolf habituation	→	Discourage wolf habituation; more proactive removal of potential problem wolves	→
	No regulated hunting and trapping	No regulated hunting and trapping; licensed sportsperson may be used to resolve conflict with livestock in lieu of government response	Regulated hunting and trapping with FWP Commission oversight; conservative harvest on quota or permit system with mandatory reporting	Regulated hunting and trapping with FWP Commission oversight; harvest on quota or permit system with mandatory reporting; harvest quota more liberal as number of breeding pairs increase
Wildlife Services	Incremental approach, conservative	→	Incremental approach; lethal removal of problem wolves more liberal	Incremental approach; lethal may be 1st, especially on private land
Private Citizens	Non –lethal harassment	→	→	→
	Lethal take in defense of life/property	→	→	→

***** Montana shares a legal requirement with the states of Idaho and Wyoming to maintain a minimum total of 30 breeding pairs in the region. For the purposes of adaptive management, Montana will apply the federal breeding pair definition (a male and a female and at least two pups on December 31) since not all packs successfully breed and have pups every year. Montana would need to maintain 14-18 social groups (defined as four or more wolves traveling in winter) statewide to reliably attain a minimum number of 10 breeding pairs with at least two pups on December 31.

By applying the federal recovery definition of breeding pair, FWP would incorporate an added measure of security and margin for error in the face of unforeseen future events, as well as greater flexibility for management decisions on a day-to-day basis. Successful reproduction would be documented as well. Because not every social group would meet the federal recovery definition as a breeding pair, more groups of wolves would also exist on the landscape in assurance that Montana's minimum contribution towards the tri-state total is achieved. As the Montana wolf population becomes more established, through the monitoring program, FWP will evaluate the more general definition of social group (four or more wolves traveling in winter) as a potential proxy for a breeding pair. (See Monitoring section below).

Wolf distribution in Montana, just as for all wildlife, will ultimately be defined by the interaction of the species' ecological requirements and human tolerance, not through artificial delineations. Social acceptance of wolves is highly variable across the landscape and among different landowners. As a wide ranging carnivore, gray wolves are capable of traveling long distances in relatively short periods of time and could cross many different property boundaries and land uses in a single day. Wolves will be encouraged on large contiguous blocks of public land, managed primarily as backcountry areas or national parks where there is the least potential for conflict, particularly with livestock. Wolf packs in areas of interspersed public and private lands will be managed like other free-ranging wildlife in Montana and within the constraints of the biological and social characteristics, the physical attributes of the environment, land ownership, and land uses. Some agency discretion and flexibility will be exercised to accommodate the unique attributes of each pack, its history, the site-specific characteristics of its home range, landowner preferences, or other factors that cannot be reasonably predicted at this time.

FWP is aware of the concerns expressed about wolves becoming established in eastern Montana or on the Charles M. Russell National Wildlife Refuge. FWP is also aware of the concerns about the potential for wolf-livestock conflicts and wolf-prey interactions that may affect human hunters and the local economy. By not administratively restricting distribution, this alternative would allow wolves to become established by recolonizing the refuge or other areas of eastern Montana that met the ecological needs of wolves and that public acceptance would allow. By not promoting or prohibiting wolves in eastern Montana, FWP is taking a middle-of-the-road approach in allowing wolves to find their place on the landscape without any a-priori assumptions about habitat suitability or public acceptance. Yet, FWP will address conflicts responsively. Landownership patterns and how those lands are managed are also subject to change through time in eastern Montana, just as in western Montana, albeit at a slower rate. An important underpinning of this approach is that any conflicts are addressed and resolved. If wolves do cause conflict, liberal tools would be available to the local managers at the outset so long as there are at least 15 breeding pairs in Montana.

FWP does not plan to actively reintroduce wolves to the refuge or the Missouri River National Monument. At this time, FWP does not believe that USFWS intends to reintroduce wolves on either the refuge or monument. Nonetheless, FWP and citizens need to bear in mind that federal agencies managing national parks, national monuments, and national wildlife refuges all have their own missions, enabling legislation, and wildlife conservation and management goals and objectives to fulfill. FWP remains committed to addressing and resolving conflicts, no matter where wolves are located in Montana.

FWP also points out that under this or any of the alternatives, eastern Montana tribal authorities may also choose to allow wolves to recolonize Indian reservations, or they may even to pursue an active reintroduction program. Because wildlife populations on Indian reservations are managed by the respective tribal authorities, the State of Montana would not have jurisdiction, regardless of concerns expressed by other residents of eastern Montana. Under this alternative, FWP would seek to work cooperatively with any tribe, private landowners, and federal managers to resolve any conflicts stemming from wolf colonization or reintroduction in eastern Montana.

Management flexibility will be crucial to address all of the public interests that surround wolves. Wolf population management will include the full range of tools from non-lethal to lethal and will incorporate public outreach, conservation education, law enforcement, and landowner relations. An effective management program should match the management strategies to the environments or setting in which each wolf pack occurs, recognizing that wolves interact with and respond to the environment in which they live, too. Potential management actions will be evaluated in light of prevailing conditions or extenuating circumstances. Wolf populations will fluctuate as a result of management actions, natural mortality, legal harvest, illegal killing, wolf productivity, and ungulate population fluctuations. If there are fewer than 15 breeding pairs in Montana, management tools are primarily non-lethal, particularly in backcountry settings and for public lands near national parks. Examples of non-lethal techniques include monitoring wolf locations using radio telemetry, changes in livestock husbandry practices, harassment, relocation, or attempts to modify wolf behavior. A minimum of 15 breeding pairs is required to use more liberal management tools, including lethal methods to resolve wolf-livestock, wolf-human conflicts, or concern over a localized prey population in light of the combined effects of predation and environmental factors.

When the wolf population no longer fits the definition of a species "in need of management" or when wolf numbers have increased and population regulation is needed, the FWP Commission may reclassify the wolf as a big game animal or a furbearer. The Montana Legislature would establish the license, fees, and penalties for illegal activities. The FWP Commission could then establish season structure and regulations to implement a public harvest program for wolves as it does for other hunting, trapping or fishing seasons. Initiating a public harvest program is a separate administrative process from this EIS. The FWP Commission follows a process that requires public notification of the proposal, public meetings, and a comment period of at least 30 days. The FWP Commission would initiate this process at a later date when a harvest program becomes biologically sustainable. The Montana Legislature would establish license fees and penalties.

Regulated public harvest of wolves by hunting and trapping during designated seasons will help FWP manage wolf numbers, fine tune distribution, and would take place within a comprehensive management program. Through public input and FWP Commission oversight, harvest regulations would describe legal means of take, and reporting and tagging requirements. Total harvest would be strictly controlled through a permit or quota system, with season closures as soon as harvest objectives are reached. As wolf numbers increase and distribution expands, harvest opportunity would increase. Specific harvest objectives will depend on other losses to the wolf population, such as control actions for livestock depredation or loss of a pack because of intraspecific strife. On a finer scale, wolves could be managed more conservatively on remote public lands or managed more liberally in areas with high livestock densities, depending on harvest objectives, district boundaries, and pack distribution. Regulated harvest and enforcement on Indian reservations would fall under the jurisdiction of the respective tribal governments and be coordinated with FWP management objectives. Hunting or trapping is not permitted in YNP or GNP. FWP's harvest management would proceed adaptively, but all hunting and trapping is precluded if there are fewer than 15 breeding pairs in Montana. The FWP Enforcement Division would enforce all laws, rules, and regulations just as it does for other legally classified wildlife species. Regulated wolf harvest would take place within the larger context of multi-species management programs, would be biologically sustainable, and would not compromise the investments made to recover the gray wolf. Within the context of a comprehensive program, regulated harvest should advance overall conservation goals by building social tolerance, interest in, and value for the species among those who would otherwise view wolf recovery as detrimental to their ungulate hunting experiences.

During the first five years after delisting, FWP will document that the Montana wolf population is secure and continues to meet the recovery criteria established by USFWS. FWP will informally consult with USFWS and cooperating partners on a regular basis, including a periodic formal review by USFWS.

USFWS will point out any deficiencies or areas of concern and recommend corrective actions to FWP. FWP would take the necessary corrective measures to avoid a relisting of the gray wolf under ESA. FWP will undertake its own thorough, formal review after the first five years. Cooperating state and federal agencies and tribal authorities may also participate. The wolf management program will be subsequently reviewed at least every five years. A more frequent review is provided for within the adaptive management model. By definition, the model incorporates monitoring and evaluation as an ongoing effort within the management program. Management is thus refined and improved through time as information and experience accumulate.

Managing wildlife populations that range across jurisdictional boundaries is always challenging, but especially when different management goals are identified on either side of the boundary. These differing goals and objectives may, in fact, be contradictory. Furthermore, adjoining management authorities are often bound by different sets of laws and policies. Under this alternative, FWP would coordinate with other agencies and responsible parties to resolve any concerns about how cross boundary packs would be managed or how conflicts would be resolved to make sure that park, provincial, tribal, as well as individual state, and tri-state goals are met. Overall conservation and management of boundary packs would proceed concurrently under each authority's plan or policies. Interagency and tribal coordination already takes place for other wildlife species through annual interagency meetings, working agreements, and informal contacts at the field level.

As part of the tri-state coordination effort, Montana may seek an agreement or MOU with Idaho and Wyoming to clarify which state counts which wolf packs within the context of their state's management program so that all wolf packs count toward the tri-state recovery requirement and individual packs are not missed or counted twice. Furthermore, this alternative clarifies Montana's intent that boundary packs should always count toward the 30-breeding pair tri state total for recovery and delisting purposes and that management authority and responsibility are actually shared between Montana and its neighbor, whether state, federal, provincial, or tribal. For the purposes of the Montana's adaptive management program and contribution to the tri-state total, FWP will tally breeding pairs that den within Montana's state boundaries toward the number of breeding pairs which ultimately determines whether liberal or conservative management tools are to be selected. If the actual den site is unknown, Montana and the adjacent state could seek an agreement on how the pack would be counted, using professional judgment or the assignment given by USFWS at the time of delisting.

Under this alternative, FWP would seek state legislation to make the unlawful taking of a gray wolf a misdemeanor under MCA 87-1-102. This statute makes it a misdemeanor to purposely, knowingly, or negligently violate state laws pertaining to taking, killing, possessing, or transporting certain species of wildlife. Including the gray wolf under this statute would be consistent with the inclusion of other legally classified wildlife species, such as deer, elk, moose, mountain lion, or black bear. Specific penalties (e.g. fines) under MCA 87-1-102 (2) would be determined at that time. FWP would also seek legislation to include the gray wolf under the restitution sections of MCA 87-1-111 that require a person convicted of illegally taking, killing, possessing certain wildlife species to reimburse the state for each animal or fish. Adoption of penalties and fines under Montana law in addition to FWP Commission rules is consistent with the council's recommendation that law enforcement be a high priority, that illegal activity be discouraged, and that penalties be similar to black bears and mountain lions. The Montana Legislature would address these in a future session.

FWP may reexamine the current 72-hour reporting requirement (MCA 87-3-130) when a wolf is killed or injured in defense of life or property. With modern communications, it may be reasonable to reduce that time in order to better facilitate examination and preservation of evidence and expedite resolution. The 72-hour reporting requirement outlined in MCA 87-3-130 applies to any legally protected wildlife species (e.g. deer, black bear, mountain lion) when a wild animal is killed in defense of life or property.

Social Factors. This alternative, initially based on the comments and recommendations of the Montana Wolf Management Advisory Council, and its Interagency Technical Committee, was updated to reflect the significant amount of public comment received during scoping. This alternative builds upon the council's original planning effort and mirrors public comments calling on FWP to seek common ground between wolf advocates and those most directly affected by wolf presence. In addition, this alternative is based on calls for a balanced wolf management program that is consistent with modern scientific wildlife management practices and how FWP manages other large carnivores.

Several diseases and parasites have been reported for gray wolves in the lower 48 states. Some had significant impacts on population recovery, especially for wolves in Minnesota, Michigan, and Wisconsin (USFWS 2000). However, in the northern Rockies, diseases and parasites were less influential and have not significantly impacted wolf populations to date (USFWS 2000). Nonetheless, adult wolves die from a wide variety of canid diseases or parasites. Pups may be especially vulnerable to death from exposure to canine parvovirus or canine distemper (Mech and Goyal 1993, Johnson et al. 1994). Monitoring and surveillance of wolf health will provide baseline information. Even though monitoring and surveillance would not stop a disease or parasite related decline, it could demonstrate a possible reason for the decline.

FWP will monitor wolf health by analyzing biological samples collected from dead and live-captured animals. During live capture operations, overall wolf health will be assessed, including presence of external parasites. Blood will also be collected. Blood tests can indicate exposure to canine parvovirus, distemper, and other potentially detrimental diseases. Necropsies will be performed on wolf carcasses to determine cause of death, condition, age, reproductive status, and food habits. General protocols will be followed to collect reproductive tracts, stomach and colon contents, muscle tissue for genetic purposes, and any potentially diseased or parasitized tissues. Other sampling or testing may be conducted, depending on the request or concerns of the submitting party and the condition of wolf remains.

Carcasses and biological samples will be submitted to the FWP Wildlife Laboratory in Bozeman. If warranted, tissues may be collected and forwarded to other laboratories for any specialized testing or forensic investigations. The Wildlife Laboratory will be the primary repository for stored samples and necropsy data, as is the case for some other species. Through time, baseline data will be compiled, which prove invaluable in the long run. As baseline data accumulate, the value of doing routine necropsies may diminish with time, and the submission of carcasses will be reduced to special forensics or disease-related cases. Increasingly, these functions are shared with the Regional Wildlife staff. Today's computer technologies enable locally collected data to be systematically collected and made available to MFWP personnel statewide. As these applications are further developed and refined, less responsibility will be borne by the Wildlife Lab and more will be borne in the Regions. MFWP will continue informal consultation and cooperation with the Wolf Project in YNP or other wolf researchers and managers.

In the unlikely event of human injury or death during a wolf-human encounter, the wolf or wolves will be lethally controlled and the carcasses forwarded to the MFWP Wildlife Laboratory. Carcasses will be tested for rabies or other pre-disposing health factors. If a wolf bites a person during a capture and handling incident, a blood sample will be drawn so it can be tested for rabies.

Administration, Delisting. Upon approval of plans from Montana, Idaho, and Wyoming, USFWS would propose to delist the gray wolf from ESA. When that administrative process is complete, management authority is transferred to the respective states in which wolves reside. State laws and administrative rules become the regulatory and legal mechanisms guiding management. Upon delisting, the wolf would be reclassified under Montana state law as a "species in need of management" according to legislation passed during the 2001 Montana Legislature (SB163). This category offers full legal protection in that a wolf could not be killed without just cause or outside guidelines and administrative rules. Some public comments suggest that the gray wolf be reclassified as a predator under state law, or in a dual-

classification status depending on where on the landscape it is or whether it is on public or private land. FWP clarifies within its preferred alternative that a dual classification for wolves in Montana would not be legal under state laws set to take effect automatically upon delisting. FWP further clarifies that Montana could not maintain an adequate number of wolf packs if wolves on private property or outside designated wilderness areas or national parks could be killed as if classified as a "predator" and subject to unregulated taking, such as the coyote. Nearly all of the wolf Packs in Montana have been found on private land and/or outside wilderness areas and national parks. However, individual wolves depredating livestock can be killed in defense of private property (see livestock section below).

Upon delisting, FWP and the FWP Commission will establish the regulatory framework to manage gray wolves in Montana as a "species in need of management" consistent with the parameters of this alternative. The FWP Commission could then change the legal classification to furbearer or big game animal at some later time. FWP is responsible for implementing monitoring, research, law enforcement, public outreach, and other functions. The FWP Commission oversees FWP policy. The preferred alternative describes a statewide plan that would be implemented by FWP at the local level through the FWP regional headquarters and overall coordination in Helena. As such, the management plan described by this alternative outlines an overall framework that would take effect through a set of consistent legal guidelines and management strategies statewide. A MOU will be signed by FWP, MDOL, and WS to address wolf-livestock conflicts. The Montana Legislature maintains its budget oversight authority. Ongoing interagency, tribal, and interstate coordination activities are important cornerstones of program administration.

FWP anticipates that the public will readily identify real or perceived problems or shortcomings of the program. The challenge for FWP will be to discern between earnest differences of opinion in preferred management direction and substantive shortcomings of the program. Difficult decisions will have to be made and will sometimes be called into question by various interests. However, the ensuing public dialogue will also help evaluate the program and lead to improvements. The Montana Wolf Management Advisory Council recommended that the State of Montana continue to engage a diverse advisory citizen's group to collaborate on wolf management.

Prey Populations. FWP would seek to maintain the public's opportunity to hunt a wide variety of species under a variety of circumstances in a sustainable, responsible manner. Wolf presence within the yearlong range of a specific ungulate herd adds a new factor that FWP biologists must consider among all environmental and human-related factors. FWP would integrate management of predators and prey in an ecological, proactive fashion to prevent wide fluctuations in both predator and prey populations (Table 23). To that end, FWP may increase or decrease hunter opportunity for either predators or prey species, depending on the circumstances. If reliable data indicate that a local prey population is significantly impacted by wolf predation in conjunction with other environmental factors, FWP would consider reducing wolf pack size. Wolf management actions would be paired with other corrective management actions to reduce ungulate mortality or enhance recruitment. Concurrent management efforts for wolves and ungulates would continue until the prey population rebounded, recognizing that by the time prey populations begin to respond they may be influenced by a new set of environmental factors.

FWP regularly surveys ungulate populations across a spectrum of their habitats. Information gathered from live populations is also supplemented by harvest information gathered at hunter check stations or through the telephone harvest survey. FWP will intensify ungulate monitoring efforts and consider habitat enhancement projects where wolf packs are established. Research will also improve ecological understanding of wolf-ungulate interactions and evaluate specific management actions for ungulates and/or wolves.

FWP further clarifies under this alternative that prey species are managed according to the policy and direction established by the programmatic review of the wildlife program (FWP 1999) and by species plans. Even though plans are written for individual species, the underlying foundation of those plans is based on an ecosystem perspective. These plans typically describe a management philosophy that protects the long term sustainability of the resource and aims to keep the population within management objectives based on biological and social considerations. As recommended by the council, the gray wolf will be incorporated into ungulate management and future planning efforts.

Funding. FWP acknowledges that existing financial resources are not adequate. FWP will seek additional funding from a diversity of sources, including special state or federal appropriations, private foundations, or other private sources. The states of Montana, Idaho, and Wyoming are still investigating the idea of a grizzly bear/gray wolf trust fund that could be created through a special federal appropriation to fund the conservation and management of these two species of national significance over the long term. FWP will use state license money and matching federal funds to conserve and manage this native species on equal standing with other carnivores like mountain lions or black bears. License revenue will be used to partially fund the program since FWP intends to use regulated harvest as a management tool. The FWP personnel and financial resources necessary to fulfill the responsibilities of wolf conservation and management, law enforcement, human safety, public outreach, resolution of wolf-livestock conflicts, compensation, and program administration is an estimated $913,000-$954,000 for the first year of full implementation. That does not include overhead or account for inflation. FWP more closely studied the budget presented in the Draft EIS and updated the budget estimates in the Final EIS. The FWP budget estimate reflects the comprehensive nature of designing and implementing a wolf program. It also reflects an extra $50,000 to fund increased efforts to reduce the risk of depredation and implement more proactive management strategies, the activities of WS, as well as a compensation program.

Compensation for livestock losses would be funded independently and not require the use of state funds, but the amount is still reflected in the budget to accurately represent the cost in the overall program. FWP and the Governor have been working with Idaho and Wyoming officials in preparing a budget request for the tri-state Congressional Delegation to fund wolf and grizzly bear programs for the next three to five years. FWP is seeking these special annual federal appropriations because the trust fund will likely take some time to put together and funding needs in the interim should be addressed. A detailed budget is presented in Chapter 4 and represents Montana's upcoming Congressional budget request. Adequate funding from supplemental sources is required to implement all elements of this alternative. FWP is committed to making sure that FWP has adequate resources to meet the high expectations of the public for the wolf program without having to divert resources from other popular, but equally important programs.

Livestock / Compensation. Livestock producers and other landowners provide many benefits to the long-term conservation of gray wolves, not the least of which is the maintenance of open space and habitats that support a wide variety of wildlife, including deer and elk. At the same time, livestock producers may experience financial losses due to wolves. These losses tend to be sheep and young cattle, although occasionally llamas, guarding dogs or other livestock are lost. Some losses can be documented reliably but others cannot. Other financial hardships may be caused by livestock becoming stressed, injured, or trampling newborn young or by changes in husbandry or management practices to reduce risk of depredation.

FWP and MDOL will work together, along with WS, to address and resolve wolf-livestock conflicts through a MOU. FWP, in cooperation with MDOL, will contract WS to respond to landowner complaints, to conduct field investigations, and to carry out control activities for problem wolves. Several Montana counties do not have a WS agent, but instead utilize the services of a county employee or county

contractor. FWP will work with those individuals in those counties directly. FWP has the ultimate responsibility for determining the disposition of wolves. See Table 24.

Table 23. The spectrum of management activities to maintain viable populations of prey species. The adaptive management model calls for selection of different management strategies as the number of breeding pairs (according to the federal recovery definition) changes from 10-15 to greater than 15. The model also calls for different strategies, depending on landownership patterns (Public Lands and Mixed Land Ownerships), social factors, land use patterns, biological constraints, and the physical attributes of the environment. Some management strategies may apply across all numbers of breeding pairs or management settings, as indicated by the arrows.

	10-15 Breeding Pairs* ←		→ **Greater than 15 Breeding Pairs***	
	Public Lands *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*	**Public Lands** *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*
Montana Fish, Wildlife & Parks Management Strategies for Prey Species	Adaptive management →	→	→	→
	Enhanced ungulate monitoring where wolves are present →	→	Enhanced monitoring in selected areas →	→
	Research to improve ecological understanding of wolf-ungulate interactions →	→	Research to evaluate specific management actions →	→
	Habitat enhancement projects	Habitat projects with cooperating landowners	Habitat enhancement projects	Habitat projects with cooperating landowners
	Adjust hunter opportunity to enhance prey populations	Adjust hunter opportunity to enhance prey subject to landowner tolerance	Adjust hunter opportunity to meet prey population objectives	Adjust hunter opportunity subject to landowner tolerance
	Integrate ungulate and carnivore management →	→	→	→
	Outreach to inform and address specific needs; emphasize landowner relations →	→	→	→

*Montana shares a legal requirement with the states of Idaho and Wyoming to maintain a minimum total of 30 breeding pairs in the region. For the purposes of adaptive management, Montana will apply the federal breeding pair definition (a male and a female and at least two pups on December 31) since not all packs successfully breed and have pups every year. Montana would need to maintain 14-18 social groups (defined as four or more wolves traveling in winter) statewide to reliably maintain a minimum number of 10 breeding pairs with at least two pups on December 31.

Addressing wolf-livestock conflicts will entail two separate, but parallel elements. One element will be management activities by WS and FWP to minimize the potential for wolf-livestock conflicts and to resolve the conflicts where and when they occur. Examples are providing technical assistance and taking actions that reduce the probability that the offending wolf or wolves will be involved in another depredation incident. This would be funded, administered, and implemented by the cooperating agencies. The second element addresses the economic losses of individual livestock producers through a compensation program when livestock are injured or killed by wolves. The two elements, management and compensation, are funded, administered, and implemented separately and independently of one another--but parallel one another, united in the goal of maintaining a viable wolf population and addressing economic losses.

Livestock producers would report any suspected wolf depredations (injuries or death) or the disruption of livestock or guarding animals to WS directly. If the investigating WS agent determines that a wolf or wolves were responsible, management response will be guided by the specific recommendations of the investigator, the provisions of this plan and by the multi-agency MOU. FWP would direct WS to take an incremental approach to address wolf depredations, guided by wolf numbers, depredation history, and the location of the incident. When wolf numbers are low and incidents take place on remote public lands, WS would use more conservative management tools. WS could apply progressively more liberal methods as wolf numbers increase and for incidents on private lands. Conflict history of the pack, time of year, attributes of the pack (e.g. size or reproductive status), or the physical setting will all be considered before a management response is selected. Management actions will be directed at individual problem wolves. Non-selective methods, such as poison, would not be used.

FWP may also approve lethal removal of the offending animal by livestock owners or their agents by issuing a special kill permit. A special kill permit is required for lethal action against *any* legally classified wildlife in Montana, outside the defense of life/property provision or FWP Commission approved regulations. FWP will not issue special kill permits to livestock producers to remove wolves on public lands when wolf numbers are low. If Montana had at least 15 breeding pairs, FWP may issue a special kill permit to livestock producers that would be valid for public and private lands. FWP will be more liberal in the number of special kill permits granted as wolf numbers increase and for depredations in mixed land ownership patterns.

In a proactive manner, FWP, WS, or other organizations will also work cooperatively with livestock producers with an increased emphasis on proactive efforts to reduce the risk of wolf-livestock conflicts. Extra effort would be into conflict prevention rather than responding after the fact. Landowners could contact a management specialist (FWP or WS) for help with assessing risk from wolves and identifying ways to minimize those risks – while still acknowledging that the risk of livestock depredation by wolves will never be zero. In addition, FWP could work to develop programs that provide livestock operations with additional benefits if they implement preventive approaches and maintain opportunities for wildlife, including gray wolves, on private lands and associated public grazing allotments. It may also involve state and federal land management agencies.

FWP would work with the livestock industry to identify sources of funding to accomplish preventative initiatives. Some funding could come from monies FWP already provides to WS for animal damage management in cooperation with MDOL. Some of those funds could be used to support the development and implementation of preventative programs and technical field assistance to landowners in identifying risks and preventative measures prior to any depredations. Private conservation groups are also working towards those ends. Defenders of Wildlife, through its Proactive Carnivore Conservation Fund, has already cost-shared preventative efforts like electric fencing or extra guarding dogs, as well as providing volunteer labor in the field. Conflict management would emphasize long-term, non-lethal solutions, but removing problem animals may still be necessary to resolve some conflicts. Considerations leading up to

removal of wolves include persistent wolf activity, evidence of wounded livestock, the likelihood of additional losses if no action is taken, evidence of unusual attractants, and/or intentional feeding of wolves.

Beyond technical assistance from WS, FWP, and other collaborating partners, livestock producers (or their agents) may non-lethally harass wolves when they are close to livestock on public or private lands. Private citizens may also non-lethally harass wolves that come close to homes, domestic pets, or people. Upon delisting, private citizens could kill a wolf if it is an imminent threat to human life or attacking or killing a domestic dog. Livestock producers or their agents could also kill a wolf if it is attacking, killing, or threatening to kill livestock. This is consistent with Montana statutes that permit private citizens to defend life or property from imminent danger caused by wildlife.

The prohibition against indiscriminant killing of a wolf is similar to other legally classified wildlife such as big game (e.g. deer, black bear, mountain lion) or furbearers (e.g. martin, otter, or beaver). Montana law would require individuals to report incidents of wolf take to FWP within 72 hours. FWP would investigate to determine all of the facts or circumstances. Additional management tools (e.g. use of rubber bullets to haze wolves that frequent livestock concentration areas) and innovative approaches will arise on a case-by-case basis since each situation is unique.

This alternative clarifies wording from the original Council Planning Document pertaining to defense of life, property, or domestic dogs that could inadvertently mislead the reader. As a clarification of the language in this statute (MCA 87-3-130), FWP notes that *any* citizen may take a wolf protected by state law if it is attacking, killing, or threatening to kill a person or livestock, not just livestock producers or their agents. Furthermore, the *only* two legally classified wildlife species that can be injured or killed by a person defending a domestic dog without a special kill permit is the mountain lion or the gray wolf. A permit would be required for nuisance black bears or even deer. And, the mountain lion or gray wolf must be "attacking or killing" a domestic dog before a person could legally take the lion or wolf. The phrase "threatening to kill" does not apply in the context of defending domestic dogs which are not used for the purposes of herding or guarding livestock. Human intervention in those situations must be non-injurious. Formal definitions of these terms may be adopted during subsequent administrative rule-making through the FWP Commission.

This alternative also clarifies the definition of "livestock" to mean cattle, sheep, horses, mules, pigs, goats, emu, ostrich, poultry, and herding or guarding animals (llama, donkeys, and certain special-use breeds of dogs commonly used for guarding or herding of livestock) for the purposes of addressing wolf-livestock conflicts. Dogs used for other purposes such as hunting or as pets are not covered under this definition. The defense of hunting dogs or dogs as pets is addressed under *Human Safety*. This alternative clarifies the term "non-lethal harassment" to refer to situations in which a wolf is discovered testing or chasing livestock and the owner attempts to scare or discourage the wolf in a non-injurious manner and without prior attempts to search out, track, attract or wait for the wolf. A special permit would be required to actually injure or kill the wolf or if a person purposefully attracted, tracked, or searched for the wolf.

FWP is aware of the concerns raised by agricultural interests in eastern Montana about wolf recolonization or reintroduction in eastern Montana onto the Charles M. Russell National Wildlife Refuge and/or the Upper Missouri River Breaks National Monument. Because of USFWS's mission in managing wildlife refuges, it is conceivable that a wolf pack could establish a territory on the refuge. In general, national wildlife refuges are closed to all uses and taking of wildlife unless specifically opened by USFWS. It is possible that federal refuge managers would not allow livestock owners to injure or kill a wolf to protect livestock as provided in Montana's SB163 (MCA 87-3-130) (Bill Hartwig pers. comm.). However, citizens would be able to protect their livestock according to the provisions of SB163 off the

refuge. In any case, livestock producers should report any conflicts to WS. FWP would work with USFWS, WS, and livestock producers to address wolf depredation complaints both on and off the refuge, should conflicts arise. FWP hopes that all parties would support an active, responsive approach. The compensation program could play a more significant role in working through wolf-livestock conflicts. FWP will make a concerted public outreach effort to work with USFWS, WS, livestock industry groups and individual producers to provide information and additional clarification on how to report conflicts and the steps that can be taken by agencies and individuals both on and off the refuge to resolve the problem.

Table 24. The spectrum of potential management activities to minimize the potential for wolf-livestock conflicts and the tools to resolve conflicts where and when they develop. The adaptive management model calls for selection of different management strategies as the number of breeding pairs (according to the federal recovery definition) changes from 10-15 to greater than 15. The model also calls for different strategies, depending on landownership patterns (Public Lands and Mixed Land Ownerships), social factors, land use patterns, biological constraints, and the physical attributes of the environment. Some management strategies may apply across all numbers of breeding pairs or management settings, as indicated by the arrows.

	10-15 Breeding Pairs* ← | → **Greater than 15 Breeding Pairs***			
	Public Lands *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*	**Public Lands** *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*
Livestock Producers (cattle, calf, hog, pig, horse, mules, sheep, lamb, goat, guarding animal, emu, ostrich, poultry)	Lethal take in defense of life/property →	→	→	→
	Non-lethal harassment →	→	→	→
	WS response; technical assistance from WS, FWP, other →	→	→	→
	No FWP special kill permit for public lands	FWP kill permit for private lands only; conservative number issued	Limited number of FWP kill permits for public lands	FWP kill permits for private or public lands; number issued more liberal
	No open season for designated trapper →	→	Designated trapper or licensed hunter/trapper during open season	Designated trapper or licensed hunter/trapper during open season
Citizens (outfitters, hunters, recreationists)	Lethal take in defense of life/property →	→	→	→
	Non-lethal harassment →	→	→	→

Table 24. Continued.

	10-15 Breeding Pairs* ←		→ Greater than 15 Breeding Pairs*	
	Public Lands *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*	**Public Lands** *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*
Wildlife Services	Technical assistance to producers, cooperation with FWP	→	→	→
	Activities directed by Memorandum of Understanding with Montana Fish, Wildlife & Parks and Montana Department of Livestock	→	→	→
	Incremental approach, conservative	→	Incremental approach	Incremental approach, liberal
Montana Fish, Wildlife & Parks	Technical assistance to producers, cooperation with Wildlife Services	→	→	→
	No special kill permits issued	Special kill permit administration and oversight; carcass retrieval	→	→
	Responsible for disposition of wolves involved in conflicts	→	→	→
	Public outreach to inform and address specific needs	→	→	→
	No open hunt/trap season	→	Conservative hunt/trap season where depredation is chronic	Hunt/trap season to maintain packs and minimize potential for conflict

***** Montana shares a legal requirement with the states of Idaho and Wyoming to maintain a minimum total of 30 breeding pairs in the region. For the purposes of adaptive management, Montana will apply the federal breeding pair definition (a male and a female and at least two pups on December 31) since not all packs successfully breed and have pups every year. Montana would need to maintain 14-18 social groups (defined as four or more wolves traveling in winter) statewide to reliably maintain a minimum number of 10 breeding pairs with at least two pups on December 31.

This alternative would maintain and enhance the benefits of a compensation program. See Table 25. The State of Montana, with FWP in a leadership role, intends to find or create an entity to administer a compensation program. But compensation payments would not be made from FWP funds, matching federal funds intended for FWP programs, or from state revenue sources (e.g. taxes or the general fund). Defenders of Wildlife could be a partner. As Defenders of Wildlife considers changes to its existing compensation program, FWP would be willing to participate in discussions and to work with Montanans to evaluate whether a modified program would meet their needs.

The entity or non-governmental organization would be independent of FWP to retain impartiality and negotiations would take place between the livestock owner and the independent administrator. Agency decision-making on the disposition of the problem animal is independent of the outcomes of the compensation negotiations. Upon receipt of a WS investigative report confirming wolf-caused losses, Defenders of Wildlife or some other independent entity would negotiate directly with the other to determine compensation. Producers would be compensated for confirmed and probable livestock losses at fair market value at the time of death and at fall value for young of the year. Livestock eligible for compensation include cattle, calves, hogs, pigs, horses, mules, sheep, lambs, goats, and guarding animals. Domestic pets or hunting dogs would not be covered. Despite the present uncertainty of how a compensation program would be designed and administered, securing adequate funding for compensation is of equal priority as securing funding to implement the other state and federal agency management activities.

Compensation programs are appealing and may in fact contribute to long-term conservation goals. A group of private non-profit organizations, livestock organizations, the University of Montana, and multiple state and federal agencies have been working on a comprehensive analysis of compensation programs. Final results are expected in April 2003. These results, along with future input from the public or the Wolf Management Advisory Council, could be used to determine more specific details of a compensation program.

Wolf Habitat, Connectivity, and Land Management. FWP ungulate programs link habitat and population management through sustained public hunting to achieve ungulate population objectives. In this way, FWP takes an important habitat need of wolves into consideration. This, along with the amount of land held in public ownership and adequate legal protections, provides long-term habitat availability for wolves. Federal land management agencies are increasingly managing lands from an ecosystem-level perspective, considering all components and functional relationships. FWP will collaborate with private landowners as well to address concerns about wild ungulates or other habitat-related issues.

Recent scientific peer review of the USFWS definition of a viable wolf population indicated that human tolerance, strict regulation of human-caused mortality, long term management strategies, and maintenance of the genetic connectivity among sub-populations will determine the long term viability of a recovered population (USFWS 2002). Reviewers emphasized the regulation of human-caused mortality and the importance of connectivity to long-term population security. These are the standards by which the three state plans, when taken together, will be evaluated.

In more practical terms, this highlights the importance of assuring that there are frequent natural dispersal events in which individual wolves move between and among sub-populations in Montana, Idaho, and Wyoming. Dispersal, then, constitutes the “connection” that allows genetic mixing of sub-populations and ensures the viability of the entire northern Rockies population. Montana is an important geographic and physical link “connecting” these sub-populations with Canadian populations. Canadian national and provincial parks along the continental divide provide important secure habitats for wolves just north of the international boundary. However, wolf dispersal from the U.S. northward appears to be as important to the viability of Canadian sub-populations in southern British Columbia and Alberta as dispersal from

Table 25. Direction and guidelines for compensation of livestock losses due to wolf depredation in Montana. State of Montana intends to find or create an entity to administer a compensation program. The adaptive management model calls for selection of different management strategies as the number of breeding pairs (according to the federal recovery definition) changes from 10-15 to greater than 15. The model also calls for different strategies, depending on landownership patterns (Public Lands and Mixed Land Ownerships), social factors, land use patterns, biological constraints, and the physical attributes of the environment. Some management strategies may apply across all numbers of breeding pairs or management settings, as indicated by the arrows.

	10-15 Breeding Pairs* ← | → **Greater than 15 Breeding Pairs***			
	Public Lands *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*	**Public Lands** *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*
Livestock Producers (cattle, calves, hogs, pigs, horses, mules, sheep, lambs, goats, guarding animals)	Incentives to reduce potential for conflict →	→	→	→
	Compensation and/or livestock insurance program for confirmed and probable losses at fair market value →	→	→	→
	No compensation for pets, alternative livestock →	→	→	→
Funding	Private donations and/or special state or federal appropriations (no FWP, matching federal or general state funds) →	→	→	→
Adminis-tration	State of Montana intends to find or create an entity to administer a compensation program; details pending final results of Compensation Research Study; Non governmental organization administers independently of FWP →	→	→	→

***** Montana shares a legal requirement with the states of Idaho and Wyoming to maintain a minimum total of 30 breeding pairs in the region. For the purposes of adaptive management, Montana will apply the federal breeding pair definition (a male and a female and at least two pups on December 31) since not all packs successfully breed and have pups every year. Montana would need to maintain 14-18 social groups (defined as four or more wolves traveling in winter) statewide to reliably maintain a minimum number of 10 breeding pairs with at least two pups on December 31.

there to the U.S. Canadian packs will likely continue to be a source of wolves dispersing into the U.S. while some U.S. wolves will continue dispersing into Canada. This exchange will be important to both U.S. and Canadian wolf populations.

By adopting the more specific federal breeding pair definition during the first few years of state-directed management, Montana will be assuring that adequate numbers of dispersal events occur. As wolf distribution slowly expands to suitable habitats with a minimal number of conflicts over time, the Montana population will still be a reliable source of dispersers within the bigger regional population. Across the wolf recovery area in the northern Rockies, Yellowstone and Glacier national parks function as core habitats at opposite ends of current wolf distribution. Adequate wolf numbers and distribution between those secure areas, legal protection, public outreach and education, and the network of public lands in western Montana, central Idaho, and northwestern Wyoming facilitates connectivity and dispersal between the sub-populations. The monitoring program and ongoing coordination with Idaho and Wyoming officials will ensure regional connectivity and adequate dispersal.

Specific habitat corridors, travel restrictions, or area closures are not incorporated in this alternative. They were not necessary to restore the gray wolf in Montana, and they should not be necessary to conserve and manage a recovered population. Nevertheless, the gray wolf and other wildlife species will benefit from linkage mapping efforts now underway for lynx and grizzly bears. FWP has attended technical meetings for these efforts and is a member of the Interagency Grizzly Bear Committee.

Economics / Livelihoods. The council acknowledged that the economic costs and benefits of wolf restoration in Montana accrue to individuals or economic sectors differently. Some individuals or economic sectors may benefit while others may be harmed. Thus, this issue is addressed in the Planning Document by the council's general recommendation to integrate and sustain a wolf population within the complex biological, social, economic, and political landscape. Furthermore, benefits and costs seem to affect individuals more significantly, rather than an industry as a whole. Therefore, this disparity is addressed through the inclusion of certain management tools or strategies such as those described in the *Livestock/Compensation* and *Prey* sections. FWP, WS, and others would work proactively with individual livestock producers and other private landowners to address and minimize risk of economic losses associated with wolf conflicts. The council also acknowledged that some economic sectors benefit from the increased tourism and visitation associated with wolf-viewing and tourists' perception of Montana as a wild and scenic place to visit. The council also affirmed the USFWS assessment that restrictions on federal land management activities (e.g. logging or grazing) were not necessary for long term wolf management. No restrictions are suggested by this alternative.

Information / Public Outreach. This alternative acknowledges the importance, value, and need for an ongoing educational public outreach program that parallels wolf management activities. The objective is to provide scientifically based, factual information. A collaborative approach will also be necessary, but FWP will take the lead.

FWP already started its public outreach efforts with the 2002 Montana Hunting Regulations and the 2002-2003 Trapping Regulations. Tips and information were included to help hunters and trappers correctly identify a wolf from a coyote and how to contact FWP or USFWS to report wolf sightings. FWP will take a leadership role in formulating and disseminating educational materials. FWP is aware of existing wolf-related educational materials and non-agency initiatives that could be incorporated in this important program component. These will be evaluated for future incorporation into the outreach effort.

FWP acknowledges receiving comments supporting a stronger public outreach program than what was outlined in the Draft EIS preferred alternative. Many of these comments indicated that the preferred

alternative did not place enough emphasis on this element of the wolf program. In response, FWP adds the following excerpt from the Wolf Advisory Council's Planning Document.

The long-term status of a gray wolf population in Montana will be determined by human attitudes toward wolves. FWP recognizes that the key to successful implementation of a wolf management program lies in effective working relationships with the public and landowners. A wolf management plan for any state will be controversial. Personal opinions, anecdotal experiences, and personal biases sometimes lead to emotional reactions, creating a challenging environment in which to manage the species. The preferred alternative acknowledges the importance, value, and need for an educational program to parallel wolf management activities. The objective is to provide scientifically based, factual information regarding the gray wolf and its management in Montana.

The public needs to be aware of agency activities and the status of the wolf population as well as individual packs – particularly as new packs become established. In addition, FWP will assist the public and visitors to Montana in learning how to live, work, and recreate in the presence of a recovered wolf population, as well as providing technical assistance in resolving conflicts. For example, FWP will develop information and outreach materials that explain how to: 1) distinguish gray wolves from coyotes and other species; 2) report wolf sign or activity; 3) respond during human-wolf encounters; 4) contact FWP and other officials to resolve conflicts; 5) make sense of state laws and administrative rules that govern actions by state and federal agencies as well as private citizens and that explain the penalties for illegal activities.

FWP will acquire and develop information and will take a leadership role in formulating and disseminating educational materials. However, the information sources will be wide-ranging and include other state and federal agencies, Indian tribes, and non-governmental organizations with a variety of interests. All material provided to FWP and included in the program must be factual and have a foundation of scientific scrutiny. FWP envisions a collaborative approach.

Completion of the management plan and EIS is just the first step in a series of many in preparing to assume responsibility for wolf management in Montana. FWP will need to make considerable effort to inform and work with private citizens, stakeholder groups, trade organizations etc. to improve FWP's understanding of local concerns and to inform individuals about the management program and specific provisions.

Human Safety. FWP intends to reduce the potential for wolf-human conflicts and minimize the risks of human injury due to any large-sized canid. While the risk of an aggressive encounter with a wild wolf is low, FWP believes that the risk goes up in the absence of proper management. FWP will utilize extensive outreach to inform the public, aggressively discourage habituation of wild wolves, and respond to conflicts where and when they occur. See Table 26.

If a wolf (or similar large canid) loiters near ranch buildings or rural residences, FWP will evaluate the potential risk to human safety, taking into account the setting, behavior of the animal, and the sequence of events. Across the spectrum of wolf distribution and numbers, FWP will take an incremental approach. Potential actions include: increasing contacts within the local community and the media, closely monitoring the situation, radio collaring the animal to track its movements, aversive or disruptive conditioning, harassment, relocation, or lethal removal. A wolf could move through these areas, but length of stay and behavior will be important criteria for determining the appropriate management response. FWP will require some degree of flexibility to be most responsive to public safety concerns. Although the management responsibility related to wildlife and human safety rests with FWP, local law enforcement or other state or federal agency personnel may respond to a wolf-human incident if FWP personnel are not available in a timely manner. In the unlikely need to defend human life during a wolf

encounter, citizens may use any means, including lethal force, to address an imminent threat. Citizens must notify FWP afterward. This general approach, consistent with FWP guidelines for mountain lions and black bears, would be adopted as nuisance wolf guidelines.

FWP will provide educational materials to the general public with information about appropriate responses during wolf encounters (do's and don'ts) and how to minimize the potential for problems near homes and rural schools. This material will also include information about wolf behavior, body posture, tail position, vocalizations, etc. to help the public evaluate the situation, correctly interpret wolf behavior, and communicate the details accurately to agency personnel. An educational effort will also help the public understand the differences between wolves, mountain lions, and bears in terms of animal behaviors, potential risk of injury, appropriate human responses when threatened, and how to live and recreate safely in the presence of these large carnivores.

Montana statute (87-3-130, MCA) allows a person to kill a wolf if the wolf is "attacking, killing, or threatening to kill" a person or livestock when there is an immediate and direct threat. This statute also allows a person to kill a wolf if it is "attacking or killing a domestic dog." Dog in this context refers to dogs kept as pets and hunting dogs. Dogs used for the purposes of herding or guarding livestock are discussed within the *Livestock/Compensation* section. See the clarification above.

Monitoring. FWP has the primary responsibility to monitor the wolf population, although collaborative efforts with other agencies and universities will be important. FWP will coordinate with adjacent jurisdictions to monitor boundary packs, whether tribes, NPS, other states, or provinces. This type of coordination already occurs for other wildlife species.

FWP will estimate wolf numbers and pack distribution, document reproduction, and tabulate mortality. FWP will also tabulate the number of breeding pairs meeting the federal recovery definition. Ecological understanding will also stem from documenting territory boundaries, the locations of wolf den and rendezvous sites, and identifying where significant wolf activity may be less desirable. While monitoring of the wolf population will help discern wolf population trends, wolf monitoring may also be conducted in the context of other wildlife management objectives related to prey species, such as identifying key wintering and spring wolf use areas and the prey species abundance and availability to wolves in those areas. The monitoring program will balance scientific precision with cost effectiveness. FWP will use a variety of tools, including radio telemetry and non-invasive techniques. Some social groups may be monitored more intensively than others, depending on the setting, landownership patterns, land uses, and prey species.

During the first five years post-delisting, FWP's monitoring program will have to be rigorous to demonstrate that adequate numbers of breeding pairs are present, that packs are reproducing, and that Montana's contribution to the tri-state recovery goal is met. In general, wolf populations can be monitored by counting wolves or packs, or by measuring wolf movements, reproduction or mortality. Federal wolf recovery in the northern Rockies is evaluated by counting breeding pairs, defined as an adult male and an adult female wolf raising at least two pups through December 31. USFWS has found enumerating wolves by age and sex in winter difficult at times and expensive because radio telemetry is required. If total wolf numbers or numbers of packs can substitute for more detailed criteria, it might allow significant savings in money, effort, and intrusiveness. For precise monitoring or populations in most habitats, radio telemetry is probably needed. If wolves are managed close to some threshold number, if dispersal needs to be documented, or if wolves are believed to be so inherently dangerous or vulnerable that monitoring needs to be precise, then radio telemetry is warranted. If the number of wolves is comfortably above a threshold number and less precision is acceptable, than less precise but repeatable methods like track surveys may be acceptable.

The monitoring criteria of a delisted wolf population are still under discussion by USFWS and the states of Montana, Idaho, and Wyoming. USFWS and the states will develop a post-delisting monitoring plan as part of the delisting package and identify the level at which wolves would be considered for relisting under ESA. USFWS has invited and funded the states to help provide input into developing any new post-delisting monitoring requirements that could provide accurate measures of a "wolf pack" that is as reliable and scientifically credible as the federal breeding pair recovery definition – without the significant expense of telemetry or determination of age/sex in winter. Preliminary data analysis indicates that surrogate definitions could be as scientifically reliable (Meier et al. in prep).

Table 26. Spectrum of management and public outreach activities to ensure public safety in Montana. The adaptive management model calls for selection of different management strategies as the number of breeding pairs (according to the federal recovery definition) changes from 10-15 to greater than 15. The model also calls for different strategies, depending on landownership patterns (Public Lands and Mixed Land Ownerships), social factors, land use patterns, biological constraints, and the physical attributes of the environment. Some management strategies may apply across all numbers of breeding pairs or management settings, as indicated by the arrows.

	10-15 Breeding Pairs* ← | → **Greater than 15 Breeding Pairs***			
	Public Lands *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*	**Public Lands** *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*
Citizens	Non –lethal harassment →	→	→	→
	Lethal take in defense of life/property →	→	→	→
Agency Personnel or Local Law Enforcement	FWP Guidelines for Nuisance Wolves →	→	→	→
	Non-lethal harassment →	→	→	→
	Lethal removal if threat to public safety →	→	→	→
Montana Fish, Wildlife & Parks	Public outreach to inform & address specific needs →	→	→	→
	Discourage wolf habituation →	→	→	→

* Montana shares a legal requirement with the states of Idaho and Wyoming to maintain a minimum total of 30 breeding pairs in the region. For the purposes of adaptive management, Montana will apply the federal breeding pair definition (a male and a female and at least two pups on December 31) since not all packs successfully breed and have pups every year. Montana would need to maintain 14-18 social groups (defined as four or more wolves traveling in winter) statewide to reliably maintain a minimum number of 10 breeding pairs with at least two pups on December 31.

FWP will monitor and tabulate packs according to the federal breeding pair definition to make decisions under the adaptive management framework. Concurrently, FWP would also tabulate packs according to a more general definition of a social group, meaning "four or more wolves traveling in winter." USFWS data indicate that there is a significant correlation between the number of packs meeting the federal recovery definition as a breeding pair and the number of social groups according to the more general definition of four or more wolves traveling in winter (Meier et al. in prep). While there is no guarantee that a group of four or more wolves traveling in winter would include young of the year, it is indicative of a socially cohesive group holding a territory and capable of reproduction. Four or more wolves traveling together will likely contain a male and female as an alpha pair and that has or will produce young in the spring. Determining counts in winter would follow the peak of human-caused mortality on adult wolves associated with summer/fall livestock grazing seasons, potential illegal mortality during the fall big game hunting seasons, and the harvest expected through regulated hunting

FWP will use the monitoring program to validate that the more general definition is adequate to document that the population is reproducing and secure and according to the post-delisting monitoring protocol cooperatively established. Once FWP and USFWS become confident that the more general definition is adequate, FWP will apply it within the adaptive management decision-making framework and FWP would not monitor packs using the more rigorous federal recovery definition. Maintaining the federal recovery definition as the monitoring metric under adaptive management over the long term may be too stringent for a recovered population, especially in light of the difficulty in distinguishing pups from similar-sized adults in December and the expense of radio telemetry.

Other Wildlife. Under this alternative, the gray wolf would become integrated into FWP's wildlife management program as the species integrates itself back into the natural environment. Other species of wildlife will benefit from the increased amount and availability of carrion while other species may compete for the same prey base, alter habitat use patterns to increase security, or even be killed by wolves. Overall, FWP's program seeks to conserve and manage wildlife from an ecological point of view rather than focusing on single species. Recognition of ecosystem functioning is also important.

Private Property. FWP recognizes that tolerance for wolves on private property is important to maintain the long-term security of a wolf population in Montana. Livestock damage in the context of private property is addressed above. Private property owners retain the right to grant or deny access to their property by FWP, WS or other entities. Private property owners also retain the right to choose whether any wolf management activities or control actions take place on their property.

Hybrids. FWP would respond similar to USFWS response in Alternative 1 (No Action). Montana law assigns regulatory oversight of wolf-dog hybrid or captive wolf ownership to FWP. State law prohibits removing wolf pups from the wild. At the present time, state laws are thought to be adequate. Public outreach efforts will include identification techniques to discern a hybrid or captive wolf from a wild wolf. FWP biologists or game wardens will assist local authorities in making that determination and provide the appropriate management support to local authorities if necessary.

Wildlife Management Areas. Wolves will be able to occupy or hunt on WMAs, consistent with the philosophy that mountain lions and black bears inhabit these lands, too. While these lands were purchased with license revenue and are managed primarily for wintering ungulates, they also provide habitat for a variety of wildlife species and for public recreation opportunities.

WMAs frequently adjoin both public and private lands and may attract carnivores due to the concentration of deer and elk. Wolf occupancy may cause ungulates to alter habitat use patterns, which may provide some relief for chronically overgrazed areas. However, wolf occupancy may also redistribute wild ungulates to neighboring private lands, potentially generating other conflicts. FWP will

work collaboratively to address this situation and resolve any conflicts, but will generally not remove individual wolves or wolf packs that use WMA lands.

Alternative 3. Additional Wolf

Under this alternative, FWP would adopt and implement the Montana Wolf Management Advisory Council's Wolf Conservation and Management Planning Document and the subsequent updates described in Alternative 2 (Updated Council), but with some modifications. Each issue is listed in the same chronological order as the other alternatives. If this alternative approaches the issue as the council had recommended, it will be stated and the reader is referred to Alternative 2 (Updated Council). If this alternative approaches the issue differently, the changes are described.

Upon federal delisting, provisions of SB163 take effect and wolves would automatically be reclassified under state law from "endangered" to a "species in need of management." This statutory classification confers full legal protection.

Implementation of this Alternative

Implementation of this alternative is contingent on securing adequate funding for all program elements. Implementation also requires FWP to develop and adopt final administrative rules and regulations under the "species in need of management" designation. The FWP Commission may then approve and adopt the administrative rules and regulations, including any special language pertaining to wolf management or how FWP would interpret relevant state laws. This alternative would form the basis of those administrative rules and regulations. Future FWP Commission action could reclassify the gray wolf as a big game animal or a furbearer when it becomes appropriate to do so. The FWP Commission would concurrently establish regulations pertaining to management and regulated harvest under the new species designation. The Montana Legislature would establish a wolf license for regulated public harvest, the license fee, penalties for illegal take, and the restitution value. MOUs must also be finalized with MDOL and WS. FWP may seek to develop MOU's or cooperative agreements with Indian tribes to coordinate management and clarify roles and responsibilities.

How Does this Alternative Address the Major Issues?

Wolf Management, Numbers and Distribution. Under this alternative, FWP would recognize the gray wolf as a native species and its management would be integrated within the wildlife program, as described for Alternative 2 (Updated Council). However, the adaptive management framework described for Alternative 2 would be modified to increase from 15 to 20, the number of breeding pairs (by the federal recovery definition) required to transition from conservative to liberal management tools. All other aspects of Table 22 remain the same.

Social Factors. This alternative uses Alternative 2 (Updated Council) as a baseline, yet presents a different management scenario in which greater numbers of breeding pairs would be required prior to implementing liberal management tools. The social factors underlying this alternative originate in public comments expressing general support for FWP to manage the gray wolf similar to other large carnivores, but to do so conservatively and with greater numbers of wolves on the landscape.

Administration, Delisting. Same as Alternative 2 (Updated Council), with one exception. Under this alternative, FWP would organize an annual workshop and interagency coordination meeting instead of working with a "standing" advisory council. The emphasis would be on citizen input and participation in the spirit of problem solving and on agency accountability back to the public. Participation by diverse

interests would be encouraged. Montanans and agency personnel would have the opportunity to identify and discuss issues as well as brainstorm solutions in an informal, non-confrontational atmosphere. Technical experts and decision makers would be present to listen, answer questions, provide information, as well as to formulate strategies for addressing the issues raised. Because other agencies have authority and jurisdiction to address the issues identified by the public, such as the federal land management agencies, their participation is strongly encouraged. The overall emphasis would be program evaluation, refinement of policy, and on the initial stages of establishing new policy or management direction in response to unforeseen developments. Potential outcomes of these coordination meetings include potential changes in FWP management strategies that could involve the FWP Commission or the Montana Legislature at a later time. Other outcomes may be enhanced understanding, improved communication, and continued involvement by all Montanans, not just a representative council.

The FWP Commission fulfills some of the same functions as an advisory council in that it is comprised of citizens, discusses issues and sets policy direction. FWP Commissioners would be encouraged to attend the workshop and interagency meetings.

Prey Populations. Same as Alternative 2 (Updated Council). See Table 23.

Funding. Same as Alternative 2 (Updated Council), with one exception. Under this alternative, the State of Montana would not find or create an entity to administer an independent compensation program (see below) and that line item would not be reflected in the budget. The estimated FWP budget for this Alternative is $897,000. Compared to Alternative 2, this alternative increases the budgeted amount for enhanced ungulate monitoring (from $75,000 to $100,000). A detailed budget is presented in Chapter 4.

Livestock / Compensation. Under this alternative, FWP would address wolf-livestock conflicts as recommended by the council in Alternative 2, using the same management framework and tools. Landowners would still be able to contact a management specialist (FWP or WS) for help with assessing risk from wolves and identifying ways to minimize those risks—while still acknowledging that the risk of livestock depredation by wolves will never be zero. In addition, FWP would work to develop programs that provide livestock operations with additional benefits if they implement preventive approaches and maintain opportunities for wildlife, including gray wolves, on private lands and associated public grazing allotments. It may also involve state and federal land management agencies.

Under this alternative, improved management and enhanced flexibility for the agency and the landowner would be substituted for a compensation program. Compensation for livestock injury or loss due to wolves was instituted by a private organization since the federal government and the State of Montana do not financially reimburse individuals for losses because of damage caused by wildlife. The Defenders of Wildlife Wolf Compensation Trust Fund has paid a total of $81,140 for wolf-related claims in Montana since 1987 (data obtained 9-3-2002 from www.defenders.org/wolfcomp.html). But under this alternative, the State of Montana would not actively promote, create, or facilitate an independent compensation provider to fund and administer a compensation program should the existing private program be discontinued. At the present time, no compensation programs are facilitated, created, or administered by FWP for large carnivores or other wildlife species in Montana. Historically, management response and technical assistance, whether carried out by agency personnel or by landowners, have been the traditional and legal basis for addressing wildlife-livestock conflicts in Montana.

Many public scoping comments identified concerns about a compensation program, and these are briefly summarized as follows. Compensation relies on verification, and this is not easily accomplished in Montana's multi-predator, mountainous environment. It also requires assessment of value, which can vary considerably--not every animal has the same value. For example, purebred lines of sheep and cattle are valued more highly than the simple market price of a cow or sheep at auction. Specific individuals in

those genetic lines may be of even greater value. Compensation programs also require perpetual fund-raising, with uncertain results and future availability. Complications further arise from the logistics of how losses are documented and which types of livestock are covered. Even after compensation is paid, some type of field response may still be necessary because of the potential for subsequent incidents. Compensation programs typically do not take into account the changes that livestock producers make in management operations or the economic costs associated with making those changes. Fundamentally, compensation addresses a problem only after it has occurred by reimbursing livestock owners for the financial losses incurred when livestock are injured or killed.

Instead of a compensation program, this alternative would provide landowners with management flexibility within the guidelines of Montana law and the administrative rules that will be adopted by the FWP Commission. Montana law makes it illegal to indiscriminately kill a wolf unless the wolf is "attacking, killing, or threatening to kill a person or livestock." The prohibition against indiscriminant killing is similar to other legally classified wildlife such as big game (e.g. deer, black bear, mountain lion) or furbearers (e.g. martin, otter, or beaver). Montana law would require individuals to report incidents of wolf take to FWP within 72 hours. FWP would investigate to determine all of the facts or circumstances. The actual management tools proposed for landowner use in this alternative were described under Alternative 2 (Updated Council). Additional management tools (e.g. use of rubber bullets to haze wolves that frequent livestock concentration areas) and innovative approaches will arise on a case-by-case basis since each situation is unique.

Wolf Habitat, Connectivity, and Land Management. Same as Alternative 2 (Updated Council).

Economics / Livelihoods. Same as Alternative 2 (Updated Council).

Information / Public Outreach. Same as Alternative 2 (Updated Council). See Table 22.

Human Safety. Same as Alternative 2 (Updated Council). See Table 26.

Monitoring. Same as Alternative 2 (Updated Council). See Table 22. However, under this alternative, the overall wolf monitoring intensity may decrease because a higher number of social groups will be present in Montana so a high degree of precision is less warranted. Some groups could be still monitored closely (e.g. groups which use private lands) while others may be monitored less intensively.

Other Wildlife. Same as Alternative 2 (Updated Council).

Private Property. Same as Alternative 2 (Updated Council).

Hybrids. Same as Alternative 2 (Updated Council).

Wildlife Management Areas. Same as Alternative 2 (Updated Council).

Alternative 4. Minimum Wolf

Under this alternative, FWP would develop and adopt a wolf conservation and management program that meets the minimum standards for a secure, viable wolf population. It maintains the fewest wolves possible to fulfill the legal requirement of wolf recovery. It represents the most aggressive management philosophy and the lowest tolerance for wolf presence. Most of the underlying philosophies and guiding principles endorsed by the Council are stripped away, although many of the same management tools remain. This alternative most closely matches the "no wolf" sentiment expressed in some public

comments, but a strictly "no wolf" alternative was not considered for further development because it is outside the sideboards of federal wolf recovery.

Upon federal delisting, provisions of SB163 take effect and wolves would automatically be reclassified under state law from "endangered" to a "species in need of management." This statutory classification confers full legal protection.

Implementation of this Alternative

Implementation of this alternative is contingent on securing adequate funding for all program elements. Implementation also requires FWP to develop and adopt final administrative rules and regulations under the "species in need of management" designation. The FWP Commission must then approve and adopt the administrative rules and regulations, including any special language pertaining to wolf management or how FWP would interpret relevant state laws. This alternative would form the basis of those administrative rules and regulations. Future FWP Commission action could reclassify the gray wolf as a big game animal or a furbearer when it becomes appropriate to do so. The FWP Commission would concurrently establish regulations pertaining to management and regulated harvest under the new species designation. The Montana Legislature would establish a wolf license for regulated public harvest, the license fee, penalties for illegal take, and the restitution value. MOUs must also be finalized with MDOL and WS.

How Does this Alternative Address the Major Issues?

Wolf Management, Numbers and Distribution. This alternative grows out of the public comments suggesting that gray wolves don't belong in Montana and that their presence through recolonization and reintroduction is entirely incompatible with the modern landscape. In the eyes of one citizen, "Montanans were forced to accept these wolves." The underlying philosophy of this alternative is one of minimal tolerance for wolf presence on both public and private lands. Because Montana is "forced" to sustain some wolves and that conflicts will occur and may be unresolvable, the approach will isolate wolves from the rest of the FWP's wildlife management program.

Modern scientific wildlife management principles have limited application under this alternative. The gray wolf would not be treated as a native wildlife species and it would be managed differently from mountain lions and black bears. Wolves would be managed as closely as possible to a legally classified predator such as the coyote, while still meeting the definition of "species in need of management" which provides a legal protection not extended to the coyote. Adaptive principles would not apply. Management tools would be aggressive and liberal most of the time in contrast to the incremental approach of Alternative 2 (Updated Council) and Alternative 3 (Additional Wolf).

Wolf numbers would be capped at 10 breeding pair (federal recovery definition), which is Montana's expected minimum contribution towards the tri-state total of 30 pairs. More than 10 social groups will be required to achieve 10 breeding pairs as defined by the recovery definition because not every group successfully reproduces. FWP would tabulate the number of breeding pairs according to the federal recovery definition -- a male and a female with at least two pups on December 31. Total numbers will be fine-tuned to maintain only as many breeding pairs and social groups as necessary. Wolf distribution would be artificially zoned so that wolves would be strongly discouraged in eastern Montana and may in fact be routinely trapped and relocated to western Montana or removed from the population if suitable release sites could not be found. Wolves would be permitted in FWP administrative Regions 1, 2, and 3, and portions of Regions 4 and 5. The eastern boundary line would correspond to boundaries for FWP

Table 27. Wolf management strategies to maintain the minimum number of breeding pairs required in Montana under Alternative 4 (Minimum Wolf).

	Wolf Management Strategies to Maintain the Minimum Required
Montana Fish, Wildlife & Parks	Minimum number of breeding pairs and social groups required; distribution limited to western Montana and mostly on public lands Management liberal most of the time; management not adaptive; independent from rest of wildlife programs Minimum health and disease surveillance Intense monitoring required, with heavy reliance on radio telemetry Limited or no research to improve ecological understanding or evaluate management actions Law enforcement a low priority beyond administration of special kill permit programs and retrieval of wolf carcasses legally killed under special permits Public outreach emphasizes landowner contacts to inform them of wolf activity in an area; outreach also to addresses human safety concerns Significant interagency and interstate coordination required Ensure human safety; discourage wolf habitation Limited and potentially inconsistent opportunity for public hunting and trapping since many wolves would be killed through other management/control activities Liberal number of special kill permits available to landowners Management for boundary packs overlapping national parks, tribal reservations, Canada, Idaho, or Wyoming more conservative than for other packs since national parks would be an important contribution towards Montana's total number No Advisory Council or annual citizen invitation to interagency coordination meetings
Wildlife Services	When the wolf population is above the minimum, aggressive management and control to prevent establishment of new packs, especially on private property and in eastern Montana, and where there is a potential for wolf-livestock conflicts Technical assistance to landowners Field investigations and management response; lethal control first on private lands but response could be more incremental on public lands when wolf population close to the minimum standard and for packs near national parks
Citizens	Non-lethal harassment on private lands Lethal take in defense of human life or livestock on public or private lands if wolf "attacking, killing or threatening to kill" a person or livestock; may take a wolf if it is "attacking or killing" a domestic dog May receive special kill permit to remove wolves on private land; public land if there is a history of wolf-livestock conflicts; landowner could use designated trapper; number of permits liberal

Regions 6 and 7. Wolf presence in portions of Regions 4 and 5 would be tolerated, depending on whether wolves occurred in large blocks of public land or in mixed ownerships where conflicts were likely. Wolf use of private lands would be at the discretion of the landowner, one step shy of prohibiting wolves on private lands since some landowners may tolerate wolf use. Capping wolf numbers and administratively defining (or zoning) wolf distribution requires aggressive management tools and a liberal interpretation of management flexibility for both agencies and landowners. Other aspects of how wolves would be managed under this alternative are listed in Table 27.

Social Factors. This alternative represents the most liberal, exploitive management approach of the five alternatives. The social factors underlying it originate in public comments expressing dissatisfaction with why or how wolves got to Montana and opinions that wolf presence can't be accommodated in these modern times for a variety of reasons, including unacceptable impacts to livestock producers and big game populations. Rather than "getting" to manage wolves, FWP "has to" and it is a "cost." This alternative most closely addresses public comments calling for the removal of all wolves from Montana.

Administration, Delisting. Same as Alternative 2 (Updated Council). However, individual landowners would carry relatively more responsibility for management activities on private lands in lieu of agency response compared to Alternatives 2 (Updated Council) and 3 (Additional Wolf). FWP will provide as many special kill permits as possible to interested landowners for wolf control actions on their private property. WS will still respond to wolf-livestock complaints, provide technical assistance to landowners, and aid in restricting wolf distribution to western Montana.

Prey Populations. Under this alternative, wolf predation on big game populations would be minimized out of the concern that wolf predation may compete with human hunter harvest at a 1:1 ratio and is an additive form of mortality for prey populations under most circumstances. This would be accomplished by the overall aggressive management activities of this alternative, such as capping total numbers, the liberal provisions for landowners to kill wolves on private lands, limiting overall distribution, and restricting wolf use of FWP WMAs. Prey populations would be monitored less intensively than Alternatives 2 (Updated Council) and 3 (Additional Wolf) because fewer wolves would be present.

Funding. Under this alternative, the wolf program would be funded entirely by special federal appropriations, since the role of licensed hunters and trappers is expected to be minimal and the gray wolf would not be integrated into the broader context of a scientific wildlife management program. This alternative is the most expensive alternative to implement.

The estimated FWP budget for this alternative is $952,000. It requires increased FWP personnel and operations money to do the necessary wolf monitoring because the population would be managed so closely to the minimum required. Because each individual wolf becomes more "valuable" to the overall population, a high degree of precision is necessary to ensure that management decisions do not jeopardize the population and trigger a relisting. Additional personnel and operations money would be required for administration of the special kill permit program through the FWP Enforcement Division since wolf management on private lands is expected to be so aggressive. Additional funding would also be needed to inform private landowners when wolves are in the area and for other coordination among agencies and private landowners. Because of the high degree and frequency of coordination required between FWP regions, between Montana and the other states, and likely with USFWS, administrative costs are expected to increase. The budgeted amount for WS would decrease because there would be fewer wolves in Montana, and landowners could be responsible for most conflict resolution on private lands. The budget would not include compensation (see below).

Livestock / Compensation. Under this alternative, there is little tolerance for wolves on private property. FWP would be as liberal as possible in the number of special kill permits issued to livestock producers

and other private property owners in the vicinity, while maintaining the minimum number of wolves required (Table 28). Livestock producers could still kill wolves caught "attacking, killing, or threatening to kill" their livestock and the FWP Enforcement Division would still investigate defense of property incidents. Because of the underlying premise of liberal, aggressive wolf management to limit wolf numbers and distribution, with landowner participation, livestock losses would be minimized to the extent possible. Therefore, a compensation program is not included under this alternative.

Wolf Habitat, Connectivity, and Land Management. Under this alternative, Montana's connectivity requirement would be met through a trapping/relocation program to artificially simulate the natural dispersal events required to ensure long-term genetic viability. Survival of relocated wolves has not been empirically determined for Montana wolves. Therefore, a strong reliance on the core habitats provided by national parks would be necessary because these packs could more reliably provide dispersing individuals. In addition, these packs would be managed more conservatively than other packs. No specific habitat corridors, travel restrictions, or area closures are incorporated in this alternative.

Economics / Livelihoods. This alternative favors the economic interests of livestock producers and the interests of big game hunters because aggressive management would limit wolf numbers and distribution—and presumably the impact of wolves on livestock and ungulate populations. However, some landowners may incur some expenses in carrying out wolf management activities on their private properties. YNP would still be a prime wolf-viewing destination. But, outside YNP, ecotourism and wildlife-viewing interests would not be given much consideration under this alternative.

Information / Public Outreach. The alternative expands the outreach efforts in Alternatives 2 (Updated Council) and 3 (Additional Wolf) to include significantly greater FWP communication and coordination with individual landowners due to the high number of special kill permits available. Under this alternative more so than any other, FWP would also notify landowners when wolves are known to be in the area. Frequent notification is added to this alternative in response to public comment gathered during scoping.

Human Safety. Same as Alternative 2 (Updated Council).

Monitoring. Under this alternative, the monitoring program is much more intensive than the other alternatives. This is because FWP will be managing the wolf population very close to the minimum requirements to keep the northern Rockies population from being relisted. Pack status must be known with a high degree of certainty. The monitoring program will rely heavily on radio telemetry so that packs could be found readily to notify landowners when wolves are in the area and so that pack status is monitored on an ongoing basis. FWP would do whatever was necessary to keep at least one radio collar in as many social groups of wolves as required in order to document 10 breeding pairs meeting the federal recovery definition. A significant commitment of FWP resources and field personnel to trap and monitor packs would be required in order to achieve the necessary precision when the wolf population so close to the minimum standard.

Other Wildlife. Benefits of wolf presence to other wildlife (like scavengers) are minimized due to minimal wolf numbers and limited distribution. Conversely, other wildlife species, such as beaver, which are prey for wolves, may benefit from the wolf low numbers. Under this alternative, the gray wolf is not integrated into FWP's wildlife management program, but other species will continue to be managed in the presence of a limited wolf population.

Private Property. The alternative is more deferential to private property owners' decisions about wolf use of their lands. Since wolves would not be treated like other publicly owned wildlife, landowners would

be granted greater latitude to resolve conflicts so long as the overall wolf population in Montana remained above the minimum required. See *Livestock* issue above.

Hybrids. Same as Alternative 2 (Updated Council.) See Table 22.

Wildlife Management Areas. As noted above, wolf distribution under this alternative is administratively determined and artificially maintained through management and control. Wolves would be discouraged from using FWP WMAs. FWP field personnel could haze and trap/relocate wolves discovered on WMAs. Individual wolves will be allowed to cross FWP properties, but ideally, would not be allowed to stay long enough to hunt deer or elk.

Table 28. Potential management activities that address wolf-livestock conflicts under Alternative 4 (Minimum Wolf). Management actions and the number of special kill permits become more liberal with increasing numbers of breeding pairs above the recovery goal.

	Wolf Management to Maintain the Minimum Required	
	Defense of Life/Property	**Livestock Protection**
Landowners and Livestock Producers (or their agents)	Could harass, injure or kill a wolf in defense of human life or livestock without permit on public or private lands if the wolf is "attacking, killing, or threatening to kill" a person or livestock Could harass, injure, or kill a wolf in defense of a domestic dog if the wolf is "attacking or killing" the domestic dog	May receive special kill permit from FWP for private land or public land if wolf-livestock conflicts; maximum number available to keep number of breeding pairs at the minimum May non-lethally harass wolf May hire designated trapper to fill special kill permit
Citizens (outfitters, hunters, recreationists)	Could harass, injure or kill a wolf in defense of human life or livestock without a permit on public or private lands if the wolf is "attacking, killing, or threatening to kill" a person or livestock; Could harass, injure, or kill a wolf in defense of a domestic dog if the wolf is "attacking or killing" the dog	May non-lethally harass
Wildlife Services		Provides technical assistance to landowner and investigates complaints Management actions to harass, relocate, or kill wolf if on public land; lethal control on private land
Montana Fish, Wildlife & Parks	Provide technical assistance Relocate, harass, or kill wolf	Provide technical assistance Administers special kill permit program Tabulate mortality

Alternative 5. Contingency

Under this alternative, FWP would seek to enter into a cooperative agreement with USFWS to implement the Updated Council Alternative (2) while the gray wolf is still listed as an interim step to assuming full management authority in the event that delisting is postponed. Delisting delays could be caused by the lack of conservation plans and/or adequate regulatory mechanisms in the other two states or by litigation on the actual USFWS delisting proposal. The public anticipated delays and expressed their concerns about developments beyond Montana's control during the scoping process. In response, FWP developed this unusual alternative.

This alternative allows FWP to respond to citizens' needs and address the challenges faced by those most directly affected by wolf presence, albeit more conservatively than FWP or the public may desire, until such time as the wolf is delisted and under full authority of the state. It may not be legally possible to implement some provisions, such as regulated public harvest, because of the listed status but many other aspects would be.

FWP believes inclusion of this alternative is important because gray wolves will continue to increase their numbers and distribution in Montana while the administrative process for delisting runs its course. Gathering public comment on it now as part of the EIS process allows FWP to hear from Montanans about the future of wolf management under a different set of legal conditions should wolves not get delisted in the near future. The significance or duration of any delay is speculative at this time. Nonetheless, this alternative outlines a potential approach that would allow FWP to become more involved in the day to day management of wolves in Montana than is presently the case.

Even if FWP selected this alternative as an interim management program while the delisting process is ongoing, FWP would continue working with USFWS and the states of Idaho and Wyoming to resolve any obstacles to complete delisting and the transfer of management authority from the federal government to the respective state governments. Upon delisting, FWP would implement the remaining program elements of Alternative 2 (Updated Council) that had previously been prohibited by federal regulations.

Implementation of this Alternative

Section 6 of ESA provides an opportunity for cooperative agreements between USFWS and the states for the conservation of endangered or threatened species. Implementation of this alternative would involve FWP modifying the existing Section 6 agreement with USFWS to include wolf conservation and management. USFWS may have to fulfill other administrative responsibilities prior to implementing this alternative. FWP would implement the Updated Council Alternative (2) to the extent allowable by federal law (and existing rules) while the species is still listed. The State of Montana would be the primary decision maker. USFWS would maintain some oversight authority to assure that FWP does not violate the agreement, violate ESA or federal rules, or stray outside the provisions outlined in this alternative. USFWS would annually review the state's program. WS would still investigate and resolve wolf-livestock conflicts as described in Alternative 2 (Updated Council). Implementation of this alternative is contingent on securing adequate funding from federal and private sources for all program elements.

FWP and USFWS would renew the agreement, even modify it when and where necessary, until all three states have acceptable management plans and adequate regulatory mechanisms, USFWS has completed its delisting process, and any litigation delaying the transfer of management authority is resolved.

Upon delisting, FWP would take the administrative steps necessary, including MEPA compliance if a supplement to this EIS is required, to adopt and implement the remaining provisions of the Updated

Council Alternative (2) that had been prohibited by federal law. State laws and regulations would then fully guide the program, including SB163 provisions that reclassify the gray wolf from "endangered" to a "species in need of management." This classification confers full legal protection.

The Draft EIS stated that there was an important caveat to this alternative that would affect FWP's decision whether to implement it. In 2000, USFWS proposed to reclassify gray wolves in the northern Rockies as "threatened" and to implement new rules commensurate with that downlisting. After the release of FWP's Draft EIS, USFWS reclassified wolves in the Northwestern Montana Recovery Areas as "threatened" (USFWS 2003a). The newly-adopted rules provide for greater agency flexibility in resolving conflicts. Because of the increased flexibility for agencies and private citizens under these new rules, FWP considers this alternative viable so long as adequate funding becomes available to implement it.

How Does this Alternative Address the Major Issues?

Wolf Management, Numbers and Distribution. FWP would implement all the conservation and management elements outlined in the Updated Council Alternative (2) that are consistent with and allowed by federal law and regulations (see Table 22). Nearly all aspects would be allowed in some form or another, but the circumstances by which gray wolves could be injured or killed is an important exception because wolves would still be listed under ESA. Regulated harvest of wolves through hunting and trapping is not possible under this alternative. Furthermore, special kill permits issued by FWP to address wolf-livestock conflicts would be subject to the same provisions as the federally issued permits. These permits are discussed in greater detail in the *Livestock / Compensation* section below.

Social Factors. The social factors underlying a balanced, responsive program, as described in Alternative 2 (Updated Council), are also reflected in this alternative. Additionally, the alternative responds to Montanans' concerns that they could be negatively affected by increases in wolf numbers and distribution and a lack of management authority by Montana if the wolf was not delisted in a timely manner. Many citizens commented that it seemed unfair for Montanans to be negatively affected by delays beyond their control and that, in the absence of a more proactive program, conflicts would become increasingly severe and difficult to resolve.

Administration, Delisting. Under this alternative, the gray wolf would still be federally listed and classified as "experimental, non-essential" in the Yellowstone and Idaho recovery areas. In the Northwestern Montana Recovery Area, the gray wolf is now classified as "threatened." USFWS adopted new rules that enhance management flexibility for agencies and private landowners to resolve conflicts on private land and offers agencies additional help to address wolf-livestock conflicts on public lands (see USFWS 2003a). Federal rules and regulations would apply as they were published in the final rules (USFWS 2003a), either in the experimental areas or the Northwestern Montana Recovery Area. There are few differences between the federal rules applicable to each area, but any differences could be addressed in the FWP/USFWS agreement so that management would be more consistent across Montana.

Prey Populations. Same as Alternative 2 (Updated Council), with one exception. FWP would still integrate the wolf management with ungulate management as described for Alternative 2. However, FWP's wolf management tools would be limited to relocation if reliable data indicate that a local prey population is significantly impacted by wolf predation in conjunction with other environmental factors. Regulated harvest could not be used to reduce pack size while wolves are still listed under ESA.

Montana's final plan will need to describe what the adverse impacts are, how they will be measured, and identify possible mitigation measures. Before FWP initiates capture and relocation efforts, USFWS would need to approve the state's final plan and determine that such actions will not inhibit wolf

population growth toward recovery. USFWS may itself, in cooperation with FWP, capture and relocate wolves. FWP's prey monitoring efforts are an important aspect to assessing wolf predation effects on ungulate populations. Hunter opportunity for ungulates will still fluctuate according to ungulate population status – as it is influenced by weather, predation, previous hunter success, etc.

Funding. Funding to implement this alternative would be split between Montana and the federal government because the species would still be listed and Montana lacks a significant source of funding dedicated to ESA-listed species. Section 6 of ESA provides for 90% of the funding, but Montana would need to fund the remaining 10%. This 90-10 cost share is also predicated on the condition that Montana continues to coordinate with the other states to recover and delist the gray wolf, which most certainly will be the case. FWP would fund its share either through private sources or by state license revenue. Although regulated harvest of wolves is not allowed, this alternative would allow wolves to be relocated if a localized ungulate population were significantly impacted. In anticipation of delisting, FWP would still be trying to secure funding for the day when Montana assumes full management authority.

The estimated FWP budget for this alternative is $924,739 – $1,062,399 . The costs of a compensation program are included in that amount even though it would be funded from separate sources. Compared to Alternative 2 (Updated Council), this alternative requires that WS continue to obtain the funding for resolution of wolf-livestock conflicts from federal sources through a combination of Congressional appropriations and USFWS, as is currently the case. FWP would still direct $50,000 towards increased efforts to minimize the risk of wolf-livestock conflicts and proactive management strategies.

According to this alternative, the State of Montana intends to find or create an entity to administer a compensation program. This is reflected in the detailed budget presented in Chapter 4, but the funds would not be sourced from FWP funds, matching federal funds, or other state revenue.

Livestock / Compensation. Same as Alternative 2 (Updated Council), except that actions by livestock producers, WS, and FWP that would harass, injure, or kill wolves in conflict with livestock are guided by federal law and regulations. The federal regulations are similar to Alternative 2 (Updated Council) in that they are intended to promote flexibility for landowners and agencies to resolve conflicts by directing management response at problem wolves. The specific management tool most readily available to livestock producers to resolve conflicts is a permit that authorizes someone to take a wolf under certain conditions. These are similar to the state's special kill permit described under Alternative 2 (Updated Council). However, the federal regulations are more restrictive, in keeping with the ESA-listed status. The conditions are described in Table 29 and in USFWS (2003). It is important to note that while the adaptive management framework still guides the incremental approach, taking of wolves under the federal regulations is guided by whether the conflict took place on public or private land, not whether it took place on remote public lands or mixed land ownerships, as is the case in Alternative 2 (Updated Council).

This alternative would maintain and enhance the benefits of a compensation program, as described for Alternative 2 (Updated Council). See Table 25.

Wolf Habitat, Connectivity, and Land Management. Same as Alternative 2 (Updated Council).

Economics / Livelihoods. Same as Alternative 2 (Updated Council).

Information / Public Outreach. Same as Alternative 2 (Updated Council).

Human Safety. Same as Alternative 2 (Updated Council). FWP clarifies that current federal regulations do allow a person to take a wolf in defense of their life or that of another. The wolf must pose an immediate and direct threat. The incident would need to be reported to FWP within 24 hours according to

federal regulations, rather than 72 hours under state law. Reasonable accommodation may be allowed for incidents taking place in remote backcountry settings. Federal regulations would also allow FWP to remove a wolf that the agency determines to be a demonstrable, but not immediate threat to human life or safety. The federal regulations are similar to what is described in Table 26.

Monitoring. FWP would take the lead in wolf monitoring, but periodic consultation or assistance from USFWS is expected. FWP would monitor the population as described in Alternative 2 (Updated Council).

Other Wildlife. Same as Alternative 2 (Updated Council).

Private Property. Same as Alternative 2 (Updated Council). Federal laws guide response to wolf conflicts on private property. No government restrictions on private property uses.

Hybrids. Same as Alternative 2 (Updated Council).

Wildlife Management Areas. Same as Alternative 2 (Updated Council).

Table 29. The spectrum of potential management activities to minimize the potential for wolf-livestock conflicts and the management tools available to resolve conflicts where and when they develop. The State of Montana intends to find or create an entity to administer a compensation program. The adaptive management model calls for a more conservative approach for public lands and when there are 10-15 breeding pairs (according to the federal recovery definition of an adult male and female with two pups on Dec. 31). More liberal tools become available if there are greater than 15 breeding pairs in Montana. Some management strategies may apply across all numbers of breeding pairs or landownership, as indicated by the arrows.

	10-15 Breeding Pairs* ← | → **Greater than 15 Breeding Pairs***			
	Public Lands	**Private Lands**	**Public Lands**	**Private Lands**
Livestock Producers	Non-injurious, opportunistic harassment ok; report in 7 days →	→	→	→
	Intentional injurious harassment by permit only if wolf activity in vicinity of livestock persistent →	→	→	→
	WS response; technical assistance from WS & FWP →	→	→	→

Table 29. Continued.

	10-15 Breeding Pairs* ← | → Greater than 15 Breeding Pairs*			
	Public Lands	**Private Lands**	**Public Lands**	**Private Lands**
Livestock Producers (continued)	Lethal take in defense of livestock or herding animals requires a permit;	Injure or kill wolf in the act of biting, wounding, or killing livestock or dogs; physical evidence must be confirmed; no permit required; report within 24 hours	Lethal take in defense of livestock or herding animals requires a permit	Injure or kill wolf in the act of biting, wounding, or killing livestock or dogs; physical evidence must be confirmed; no permit required; report within 24 hours
	Kill permits available after livestock confirmed wounded or killed and agency efforts to resolve the problem were completed, but ineffective; physical evidence must be confirmed; report within 24 hours	Kill permits available if there at least 2 confirmed depredation incidents on the property or adjacent property (could be separated by a reasonable amount of time) and wolves routinely present and pose a risk to livestock or dogs; report take within 24 hours	Kill permits available after livestock confirmed wounded or killed and agency efforts to resolve the problem were completed, but ineffective; physical evidence must be confirmed; report within 24 hours	Kill permits available if there at least 2 confirmed depredation incidents on the property or adjacent property (could be separated by a reasonable amount of time) and wolves routinely present and pose a risk to livestock or dogs; report take within 24 hours
	Conservative number issued	Conservative number issued	Number issued more liberal	Number issued more liberal
Citizens (outfitters, hunters, recreationists)	Same as livestock producers	→	→	→
Wildlife Services	Technical assistance to producers, cooperation with FWP	→	→	→
	Activity directed by MOU with FWP and Montana Department of Livestock	→	→	→
	Incremental approach, conservative	→	Incremental approach	Incremental approach, liberal

Table 29. Continued.

	10-15 Breeding Pairs* ←		→ Greater than 15 Breeding Pairs*	
	Public Lands	**Private Lands**	**Public Lands**	**Private Lands**
Montana Fish, Wildlife & Parks	Technical assistance to producers, cooperation with WS	→	→	→
	Special permit administration and oversight; carcass retrieval	→	→	→
	Responsible for disposition of wolves involved in conflicts	→	→	→
	Public outreach to inform and address specific needs	→	→	→
Compensation	State of Montana intends to find or create an independent entity to administer a compensation program; details developed pending final results of Compensation Research Study; Non-governmental organization administers	→	→	→
	Private donations and or special state or federal appropriations (no FWP, matching federal or general state funds)	→	→	→

***** Montana shares a legal requirement with the states of Idaho and Wyoming to maintain a minimum total of 30 breeding pairs in the region. For the purposes of adaptive management, Montana will apply the federal breeding pair definition (a male and a female and at least two pups on December 31) since not all packs successfully breed and have pups every year. Montana would need to maintain 14-18 social groups (defined as four or more wolves traveling in winter) statewide to reliably attain a minimum number of 10 breeding pairs with at least two pups on December 31.

Table 30. Summary of how each alternative addresses the issues identified by the Montana Wolf Management Advisory Council and by the general public in spring, 2002.

Issues	Alternative 1 No Action	Alternative 2 Updated Council	Alternative 3 Additional Wolf	Alternative 4 Minimum Wolf	Alternative 5 Contingency
Wolf Management **Numbers** **Distribution**	Existing program; emphasizes species recovery and resolution of conflicts with livestock and protection of human safety; pack definition is the same as a breeding pair -- "a male and a female with at least 2 pups on December 31"; little emphasis on proactive management of numbers and distribution outside context of conflict resolution	Adaptive; management like other large carnivores; trigger is 15 breeding pairs; no cap; no zone; regulated harvest possible in the future; packs managed according to provisions of the Planning Document and the 2003 updates when within Montana state boundaries and in with coordination the adjacent authority; Montana will count packs that den within the state border towards adaptive management tally; all boundary packs are counted toward tri-state recovery requirement, but shall not be counted by more than one state	Same as Alternative 2; adaptive management trigger increased to 20 breeding pairs according to the federal recovery definition	Not adaptive; cap at minimum number of breeding pairs and social groups above delisting level; zoned out of eastern Montana and off private property; packs defined according to the federal definition of breeding pair; boundary packs managed conservatively; more management and control carried out by landowners	Same as Alternative 2; no regulated harvest; federal rules and regulations guide harassment and take
Social Factors	Conservative management, as per ESA; protectionist	Moderate; balanced; integrated into wildlife program; program goal is "biologically possible, socially acceptable, and economically feasible"	Same as Alternative 2	Aggressive management; low tolerance; treated separately as a "cost"; not integrated into wildlife program; exploitative	Same as Alternative 2, but responds to public concerns over potential delisting delays by implementing the Alternative 2 as an interim step (to the extent allowed by federal law) prior to gaining full authority

Table 30. Continued.

Issues	Alternative 1 No Action	Alternative 2 Updated Council	Alternative 3 Additional Wolf	Alternative 4 Minimum Wolf	Alternative 5 Contingency
Administration **Delisting**	USFWS, WS; listed under ESA; federal laws apply	FWP, FWP Commission, MDOL, WS; no longer listed as endangered/threatened under federal law or endangered under state law; state laws, administrative rules apply	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2, but wolf still listed under state and federal law; some federal laws and regulations apply
Prey Populations	Wolf impacts to big game populations not addressed without an approved state plan; since no state plan would be prepared, no management could occur to address prey concerns; monitoring and research at current levels	wolf/prey management integrated, ecological; increase monitoring where wolf packs establish; research; increase/decrease hunter opportunity for predators and prey currently and as appropriate to meet goals	Same as Alternative 2	Aggressive wolf management to benefit prey; no enhanced ungulate monitoring	Same as Alternative 2 but wolf management tools limited to relocation
Funding	Federal	Combination of federal, state, private sources; federal share required for implementation	Same as Alternative 2	Federal	Federal 90%, state 10%; state's share is license revenue and private
Livestock	Existing rules/regulations (experimental area rules and pending reclassification proposal)	WS MOU with FWP; FWP special kill permits for landowners; defense of life/property if wolf is "attacking, killing, or threatening to kill"	Same as Alternative 2; greater emphasis and more resources dedicated to preventative measures and proactive approaches to minimize risk	WS liberal, landowner special kill permits liberal	Same as Alternative 2, federal law and regulations guide owner harassment and take of wolves with or without a permit, on public or private lands
Wolf Habitat, Connectivity, Land Management	Provided by legal protections, achieving adequate population numbers; public education	Same as Alternative 1; FWP technical participation and coordination with land management agencies and transportation planners	Same as Alternative 2	Same as Alternative 2; connectivity through periodic trap/relocation	Same as Alternative 2

Table 30. Continued.

Issues	Alternative 1 No Action	Alternative 2 Updated Council	Alternative 3 Additional Wolf	Alternative 4 Minimum Wolf	Alternative 5 Contingency
Compensation	Voluntarily provided by Defenders of Wildlife as long as wolf still listed under ESA	Yes; State of Montana intends to find or create an entity to administer a compensation program; no FWP funds (state or matching federal monies) and no Montana general fund monies; may still be voluntarily provided by Defenders of Wildlife or	No; State of Montana would not find or create an entity to administer a compensation program; may be available voluntarily by Defenders of Wildlife	No; wolf management aggressive by landowners, WS, and FWP to minimize livestock losses	Same as Alternative 2
Economics, Livelihoods	Avoid disrupting land management activities that may be harmful to local economies and livelihoods; resolve wolf-livestock conflicts; compensation for livestock losses made by independent entity; wolf recovery benefits other economic sectors and commercial activity	Economic costs and benefits of wolf restoration in Montana accrue to individuals or economic sectors differently; integrate and sustain a wolf population within the complex biological, social, and economic landscape; acknowledge the benefits to other economic sectors associated with recovered population; compensation for confirmed and probable livestock losses; provisions to minimize wolf effects on ungulate populations through integrated management	Same as Alternative 2, but FWP would more proactively address and minimize risk of economic losses for livestock producers and private landowners to the extent possible	Aggressive and liberal management to favor the economic interests of livestock producers and others who may be economically impacted by higher wolf numbers; does not capture full economic benefits associated with tourism	Same as Alternative 2, but federal regulations guide resolution of wolf-livestock conflicts
Information, Education, Public Outreach	Existing effort	Increased effort through Conservation Education Division; technical assistance to landowners	Same as Alternative 2	Limited effort by Conservation Education Division; high degree of interaction with landowners to notify when wolves in the area	Same as Alternative 2

Table 30. Continued.

Issues	Alternative 1 No Action	Alternative 2 Updated Council	Alternative 3 Additional Wolf	Alternative 4 Minimum Wolf	Alternative 5 Contingency
Human Safety	Lethal take to defend human life if immediate threat to person and by agencies to protect human safety; citizen must report incident in 24 hours	Discourage habituation; FWP removes habituated animals; lethal take to defend human life if imminent danger; citizen must report in 72 hours; FWP or agent may take wolf to protect human safety in proactive context	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2, but reporting requirement is 24 hours according to federal regulations
Monitoring	Done by USFWS to document progress towards recovery goals	Yes; effort commensurate with other wildlife using standard protocols; balance cost effectiveness with precision; document breeding pairs for adaptive management framework; validate more general definition of at least four wolves traveling in winter	Same as Alternative 2	Yes; intense telemetry effort required	Same as Alternative 2
Other Wildlife	No special provisions; FWP responds to special needs where/when they develop; ecosystem processes; impacts to other listed species not significant	Taken into account by integrating wolf within wildlife program; ecological context so some species benefit but others may not; FWP responds to special needs where/when they develop	Same as Alternative 2	May benefit because of low wolf numbers; scavengers benefit less	Same as Alternative 2

Table 30. Continued.

Issues	Alternative 1 No Action	Alternative 2 Updated Council	Alternative 3 Additional Wolf	Alternative 4 Minimum Wolf	Alternative 5 Contingency
Private Property	Wolves may be present on private property similar to other publicly-owned wildlife; landowner response to wolf use guided by federal laws and regulations; no federally-imposed takings or restrictions on private property	Wolves may be present on private property similar to other publicly-owned wildlife; landowner response to wolf use guided by state laws and regulations; minimize potential for conflicts to the extent possible; resolve conflicts in a timely manner; owners able to grant or deny access to their property; no government-imposed restrictions	Same as Alternative 2	Wolves may be present, but there is greater deference to owners' preferences; landowners granted greater latitude to resolve conflicts and may discourage wolf use	Same as Alternative 2; federal laws and regulations guide response to wolf conflicts in context of livestock as private property; no government restrictions
Hybrids	Do not contribute to wild population; management removal possible; state laws for possession, marking, and, liability; local authorities respond	FWP/state response like USFWS response in Alternative 1	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
Wildlife Management Areas	Wolf use possible; limited input from FWP	Wolf use possible; FWP balances wolf and prey use; wolf-livestock conflicts resolved as per *Livestock / Compensation* section	Same as Alternative 2	Limited tolerance for wolf use, discouraged	Same as Alternative 2; federal laws and regulations guide response to conflicts with livestock

CHAPTER 4: ENVIRONMENTAL CONSEQUENCES

Introduction

This chapter compares the predicted environmental consequences for each of the five alternatives. Wolves will be present in Montana regardless of which of the five alternatives is selected, but the number of wolves present will vary by alternative. Different management philosophies and tools will lead to different outcomes, each based on the range of management philosophies – from conservative to aggressive.

The environmental consequences are speculative because no one can accurately predict the status of Montana's wolf population at the time of actual delisting, which may be one to three years away. Moreover, the actual outcomes will result from future management decisions and circumstances that may or may not have been fully anticipated. Therefore, the reader may find it helpful to consider the significance of the impacts described in each alternative, and then to compare alternatives relative to each other rather than to focus exclusively on the prediction. The impacts are estimated using the best available information and historical data, in keeping with accepted scientific and statistical methods. Some assumptions were necessary to estimate impacts. Those assumptions will be identified wherever they occur.

For this EIS, FWP evaluated the environmental consequences by assuming each alternative would be implemented starting in 2003. Impacts are then reported for 2015. Some environmental consequences will be short term and develop rapidly. Others may not emerge for several years. The longer time span accounted for: 1) the time required to complete the delisting process, 2) the biological life span of wolves and their prey, and 3) impacts which develop while the wolf population stabilizes. Cumulative environmental impacts result from incremental consequences added to other past, present, and reasonably foreseeable actions by FWP, including actions by other state agencies and businesses regulated by other state agencies. In this EIS, consideration of cumulative impacts is limited to the State of Montana.

While impacts are predicted, it is also possible for FWP to mitigate or lessen impacts to some degree, based on how and when specific management strategies described for each alternative are implemented. FWP intends to lessen the impacts of a recovered wolf population where possible, while still maintaining a secure and healthy population. This chapter also identifies any irreversible and irretrievable commitments of resources to implement any of the five alternatives. A summary of the consequences of each alternative is presented at the end of this chapter (Table 43).

Methods to Estimate Some of the Environmental Consequences

None of the alternatives in the EIS represent the type of policy choices examined in the analysis conducted prior to the reintroduction of gray wolves to YNP and central Idaho. Rather than a "wolves or no-wolves" analysis, this EIS analyzes the consequences of a spectrum of wolf conservation and management alternatives. This section describes the methods used to estimate certain consequences. Other methods are described under each alternative.

Wolf Numbers and Distribution

Wolf numbers and distribution are expected to increase through time. FWP is uncertain of how rapidly the wolf population will grow. Some newly colonizing wolf populations in highly productive habitat, such as YNP, have grown rapidly. Other long-established populations, such as in northwestern Montana have increased more slowly. Wolf distribution will probably be determined by prey abundance and

Montana geography that presents intermingled valleys and mountainous terrain, and a patchwork of human settlement, variable wild prey densities, and livestock distribution. Future wolf population growth in Montana will probably be determined by social conflicts between wolves and humans. At present, there is no reliable method to determine "social tolerance." How fast the population grows and where wolves will be found will differ across the five alternatives that reflect a spectrum of social tolerance and management approaches. Therefore, the total number of wolves was predicted differently for each alternative. Once the total number was predicted, the number of breeding pairs is also predicted using the mathematical relationships that describe the correlation between the minimum number of wolves in the fall population and the number of breeding pairs for the gray wolf population in the State of Montana, based on historical data (USFWS unpubl. data).

For Alternative 1 (No Action), the gray wolf stays listed and managed according to the original recovery plan and the Yellowstone EIS (USFWS 1994a). The number of wolves in the experimental population area was predicted by assuming the population would grow at 22% per year – the same growth rate assumed for the Yellowstone EIS. The number of wolves in the Northwestern Montana Recovery Area in 2015 was predicted using population performance between 1986 and 2001. The number of wolves in each area was added together to predict the total number of wolves in the Montana population in 2015.

For Alternatives 2 (Updated Council) and 3 (Additional Wolf), wolf numbers were estimated by analyzing historical data for the Montana portion of the tri-state population from 1986-2001 (USFWS unpubl.) Historical finite rates of growth (lambda) were assumed to be representative of future population performance and applied to the predicted Montana wolf population at the time of delisting in 2003. Implementation of liberal management tools was assumed to decrease the population growth rate by 50%. The decreased growth rate was applied to the population from the year liberal tools are implemented until 2015.

Owing to the uncertainty about how fast the wolf population will actually increase, FWP estimated the size of a future wolf population according to a low growth rate and a high growth rate. The low growth rate is derived from actual historical data. The high growth rate was assumed to be double the low growth rate. FWP expects the number to actually be near the low end of the range. The Montana wolf population may stabilize at numbers at or near the adaptive management trigger so that liberal tools may not be available every year between 2003 and 2015. The population could still increase or decrease from year to year.

For Alternative 4 (Minimum Wolf), wolf numbers are capped near the recovery goals. Aggressive management and control is assumed to limit the population at or near the cap.

For Alternative 5 (Contingency), wolf numbers were predicted using the same method as Alternatives 2 and 3. However, FWP could only implement some of the liberal management tools because of certain restrictions imposed by federal regulations. Therefore, the population growth rate was reduced by only 25% (rather than 50%) between the time that liberal management tools are implemented and 2015. The wolf population may stabilize at numbers at or near the adaptive management trigger so that liberal tools may not be available every year between 2003 and 2015. The population could still increase or decrease from year to year.

Prey Populations and Hunter Opportunity

The gray wolf is an effective predator of ungulates. The impact on ungulate population dynamics can usually be gauged in relation to other environmental factors, such as weather, and what other species are present in the system. For example, wolf predation may accelerate declines in ungulate populations already negatively affected by severe winters and even slow the rate of population recovery afterwards –

especially if there is more than one large predator. During a series of mild winters, wolf predation may not significantly influence ungulate populations.

All prey populations vary through time, across a diversity of habitats, and in response to ever changing environmental factors. The cause and effect relationships that make populations go up or down are often not known, yet widely debated. FWP's ungulate management program is designed to provide an opportunity for regulated harvest, while balancing population status, other mortality factors, habitat condition, landowner tolerance, hunter opportunity, previous hunter success, and an array of environmental factors known to influence populations. In general, Montana big game populations are robust and hunters enjoy greater opportunity now than even 20 years ago (see Chapter 2). Statewide harvest trends reflect that. At the regional level, similar trends are apparent, but more variable. At the hunting district level, harvest sometimes varies even more--and so do the factors influencing hunter success.

Changes in ungulate population dynamics or hunter participation may or may not be directly influenced by wolf presence. For example, in one northwestern Montana hunting district having established wolf packs since the mid-1980s, the number of elk hunters declined by 22% and the number of elk hunter days declined by 15% between the late 1980s and the mid-1990s. Declines in white-tailed deer and elk populations were attributed to additive predation pressures by wild carnivores (wolf, black and grizzly bear, coyote, mountain lion) and human hunting during those same years (Kunkel and Pletscher 1999). In a district to the south with similar habitat and snow regimes, the number of elk hunters and elk hunter days also declined, but in the absence of resident wolf packs. But in adjacent districts to the west having resident wolf packs at a lower density, the number of elk hunters and elk hunter days did not decline during that time. FWP does not fully understand why hunter effort changes at the hunting district level, but perceived or real changes in prey abundance due to a variety of factors may influence the decisions of individual hunters. Hunters may also be influenced by changes in hunting regulations for harvesting particular age or sex classes of big game.

This EIS must assess each alternative's potential impact on prey populations and hunter opportunity due to all factors, including the presence of a recovered wolf population. FWP relies on the combination of biological information, results from the telephone harvest survey, changes in the environmental, weather events, and time to interpret ungulate population trends. Ultimately, all sources of data must be taken together to respond to changes in the population status of either wolves or their prey. This EIS considers future changes in ungulate populations due to implementation of each of the five alternatives in relation to historical trends at the statewide level.

Economics

Four specific areas of economic impacts were addressed: 1) wolf depredation on livestock, 2) big game hunting (primarily elk, deer, and moose) and the big game outfitting industry, 3) recreational values, and 4) the fiscal resources of FWP. Historical data were used to calculate some economic impacts. Other economic impacts are less clear due to future uncertainty and to the variation in historical data. Impacts to recreational and social values are also difficult to determine.

Because all the alternatives maintain a recovered wolf population in Montana, the estimated socioeconomic impacts across the five alternatives are similar. In fact, those impacts which can be calculated and estimated with some reliability and that do vary with each alternative, are limited to livestock losses and agency management costs. The lack of differences in impacts across the spectrum of alternatives does not mean that the alternatives have equal impacts. Rather, it is an acknowledgement that in light of all the potential ways that wolves, prey, the environment, human hunting, and recreation

interact, it is difficult to identify the impact associated with incremental differences in wolf numbers statewide.

Livestock Losses. Livestock losses were predicted using historical data for the Montana portion of the tri-state area from 1986-2001 (WS and USFWS unpubl.). As the wolf population in Montana increased during those 15 years, the number of confirmed livestock losses generally increased as well, although losses varied from year to year. FWP expects that general trend to continue as wolf numbers and distribution increase.

To predict confirmed wolf-caused livestock losses, FWP tallied the number of cattle and sheep killed for every wolf in the population each year between 1986 and 2001 and then calculated a depredation rate for each year (number confirmed livestock kills divided by total number of wolves). The annual rates were averaged over all years to account for the variation year to year. Predicted loss in 2015 is the rate multiplied by the predicted number of wolves under each alternative. Because each alternative calls for different management philosophies and specific tools to resolve wolf-livestock conflicts, the loss rate was adjusted to account for implementation of those tools, as described below.

FWP recognizes that wolves have also been the suspected cause of some livestock losses in the past because WS could not confirm a wolf as being responsible. FWP expects this will occur in the future. Therefore, FWP examined the report forms completed by WS personnel upon investigation of a wolf complaint for the calendar years 1999-2001 to discern whether wolves could have possibly been involved. Cattle and sheep losses that were not attributed to some other obvious cause, such as disease, lightening, or accidental death were tallied as "probable" wolf-caused losses. FWP then calculated the rate of probable cattle and sheep losses. The probable loss rate multiplied by the predicted number of wolves under each alternative equals the total probable losses in 2015.

FWP also acknowledges that wolves have killed or injured other domestic animals such as guarding dogs, llamas, or horses. While these losses have been intermittent and are more difficult to predict based on wolf numbers, nonetheless, they do represent economic losses to the owner. To account for these other domestic animal losses, the Defenders of Wildlife compensation records were examined. Historically, payments for other domestic animals were about 8% of the total payments for confirmed and probable cattle and sheep losses. The economic losses for other domestic animals are estimated for each alternative by taking 8% of the predicted economic losses for cattle and sheep.

FWP is also aware that livestock producers may experience losses for which little or no physical evidence is ever found. These are referred to as undocumented losses, and they tend to be associated with remote public land grazing allotments rather than private property. This EIS does not account for undocumented losses because reliable data for Montana were not available.

Under Alternative 1, confirmed and probable livestock losses were estimated using historical data. Management protocols essentially call for a reactive approach to livestock depredation, except for a few specific circumstances.

Under Alternatives 2 (Updated Council) and 3 (Additional Wolf), implementation of liberal management tools is assumed to reduce the historic livestock depredation rate by 50% and in direct proportion to the 50% reduction in the growth rate of the wolf population. Nearly all depredations in Montana to date were on private lands. The management protocols of these alternatives should reduce the number of wolf-livestock conflicts in general, but most specifically on private lands.

Under Alternative 4 (Minimum Wolf), management strategies call for limiting the wolf population at or near Montana's share of the recovery goal. Aggressive management is assumed to reduce the historic livestock depredation rate by 75%.

Under Alternative 5 (Contingency), FWP could only implement some of the liberal management tools because the gray wolf would still be listed. Those tools are assumed to reduce livestock depredation rates by 25% and in direct proportion to the 25% reduction in the growth rate of the wolf population.

Big Game Hunting. There is a link between big game populations, the number of hunters and hunter days, and the overall levels of hunter expenditures in the state. However, the relationship between a recovered wolf population, big game populations, and Montana's economy is not clear-cut. Many things influence hunter participation, including general economic conditions, weather, demographic changes, and changes in hunting regulations. For example, between 1996 and 2000, the number of Montana residents purchasing elk hunting licenses declined by 21%, at a time when big game populations were generally increasing.

Hunter numbers, hunter days, and antlerless opportunity have changed in FWP regions and individual hunting districts where wolves were present and where wolves were not present. So far, the presence of wolves appears to play a relatively minor role among the many factors that affect big game populations, hunting activity, and the economy. It is difficult to isolate potential wolf impacts from the other factors. This is particularly true at the statewide level where differences between hunting districts or regions can be balanced by hunters shifting to other areas with better opportunity.

Therefore, across all alternatives, the economic impacts to big game hunting were estimated based on the actual observed changes year-to-year in deer, elk, and moose hunting activity from 1990-2001 (as measured by the long term average, +/- 1 standard deviation). FWP assumes that changes in the number of hunters, hunter days, and antlerless permits in the future would be no greater than changes already seen in the past. This period includes several major events, including, high hunter harvest years (e.g. 1991), the severe winter of 1996-97, summer forest fires, major programmatic changes in mule deer management, wolf pack activity in new areas, as well as significant increases in hunter opportunity for antlerless elk in some areas. Even though wolves were present in Montana from 1990-2001, changes in permits and hunter participation were driven by a host of factors including wolf predation, changes in recruitment, overwinter survival, hunter opportunity, hunter demographics, previous hunter success, changes in regulations, and hunter access. This combination of factors will persist into the future.

The economic analyses focus on changes in antlerless harvest opportunity for deer and elk and in the number of hunting permits for all moose. These are the primary management tools used by FWP to annually balance hunting pressure with ungulate population levels and to influence population trends relative to management objectives.

Alternative 1. No Action

The environmental consequences of this alternative were originally predicted for the Draft EIS prior to USFWS finalizing the reclassification rule that downlisted wolves in northwestern Montana from endangered to threatened status. In it's final rule notification, USFWS concluded that the new threatened status and the increased agency flexibility will not cause any significant increase in wolf mortality that would impact population levels or prevent population increase (USFWS 2003a). It follows by extension that the wolf population in northwest Montana would also not be expected to increase any faster than historical rates due to increased management flexibility. Therefore, FWP did not reanalyze the environmental consequences of this alternative for the Final EIS. USFWS and FWP agree that no

significant changes in population performance are expected under the new rules that would warrant a new impacts analysis. The environmental consequences of this alternative were predicted as if the current and newly revised federal management policies and regulations were carried forward from 2003 to 2015. For comparison, the environmental consequences of this and the other alternatives are presented in a summary at the end of this chapter (Table 43).

Biological Environment

Wolf Management. Wolf management is oriented toward achieving recovery goals and resolving conflicts when and where they occur. Wolves in northwestern Montana would be managed as threatened. Wolves in the rest of the state would be managed as "experimental, non-essential." Thus, slightly differing agency regulations would be implemented in different parts of the state. Management policies do not allow USFWS to proactively adjust wolf numbers or distribution except where there are human safety concerns or conflicts with livestock. Instead, conflicts are usually addressed and resolved after the fact. More conflicts may occur in the future because of higher wolf numbers and wider distribution in Montana. Wolves can be harassed or killed through agency control actions and by private landowners through a special permit in the experimental area. Private citizens can opportunistically harass or intentionally harass by permit wolves in northwest Montana. Private citizens can kill a wolf in the act of biting, wounding, or killing livestock on private property without a permit, but a permit is required to kill persistent problem wolves on public lands. The reader is referred to USFWS (2003a) for additional details.

Wolf Numbers and Distribution. Approximately 854 wolves (or about 70 breeding pairs according to the federal recovery definition) would be present in Montana in 2015. The population will fluctuate because of management actions, changes in prey density and prey distribution, disease, and intraspecific competition. It is possible that Montanans' social tolerance for wolves could lead to USFWS control actions that stabilize the population at a lower level or that the population will grow more slowly than predicted. The number of wolves in the tri-state area would also increase.

Wolf distribution will probably increase as individual wolves disperse from core areas and colonize new habitats with sufficient prey. In the absence of significant conflict, gray wolves could become established in island mountain ranges, such as the Big and Little Snowies or even in eastern Montana. Wolves would be allowed on FWP WMAs. This is consistent with existing FWP policies that these lands were purchased to benefit all wildlife but that they are managed with particular attention to wintering big game. These areas will probably always attract wolves because of the seasonally high densities of prey. In the absence of a state wolf plan, concerns about localized impacts could not be addressed.

Wolf Habitat, Connectivity, and Land Management. Connectivity requirements are met because the wolf population should provide an adequate number of dispersers that emigrate to Idaho, Canada, or Wyoming. Furthermore, wolves coming to Montana from these other areas should have a greater chance to join an existing pack or locate other dispersers to start a new pack. Public land management activities, whether logging, grazing, or travel management are not affected by this alternative. Exceptions could be made for localized area closures around dens, particularly within national parks. Land managers would change practices of their own accord at any time to meet other management objectives.

Monitoring. USFWS's monitoring efforts tabulate breeding pairs that contribute to the recovery goal, locate new packs, document the reproductive status of packs, and document the home range of packs through telemetry. If the gray wolf stays listed once recovery goals are achieved, monitoring effort may decline after documenting the minimum number of breeding pairs and demonstrating that the population still meets the recovery goals. USFWS may also have less knowledge about pack location, home ranges,

or numbers of individuals because more monitoring effort will be required over a greater geographic area. It will also be more difficult to maintain telemetry contact with every pack.

Prey Populations. FWP expects that both species of deer, elk, and moose will constitute the primary prey species for wolves in Montana, but in differing proportions in different parts of the state. Although there may be significant impacts to some populations or herd segments sporadically over time, most big horn sheep and mountain goat populations are not particularly vulnerable to predation by wolves because wolves chase rather than stalk their prey like mountain lions do. The rugged and steep terrain favored by big horn sheep or mountain goats is not conducive to chasing prey over moderate to long distances.

At the regional and statewide scale, prey populations will fluctuate through time due to all causes of mortality (predation, natural mortality, human hunting, habitat conditions, and weather events) similar to the historical patterns described in Chapter 2 (Existing Environment). Across broad geographic areas, wolf predation alone is not expected to influence prey populations in the absence of more significant environmental events. But at a localized level, prey populations may be more influenced by wolf predation, particularly in combination with predation by other large carnivores and/or human hunting. Predation pressure may exaggerate a population decline initiated by unfavorable weather events or even slow population recovery, particularly if human harvest rates of antlerless animals are too high. Localized prey populations may even stabilize at a smaller level. Wolf predation on small ungulate populations, even if infrequent, may be more influential on population trend than for larger ungulate population because predation may remove a greater proportion of animals. In the absence of a state wolf management plan, USFWS would not consider mitigating those impacts to localized big game populations through reductions in pack size. Therefore, FWP may decrease hunter opportunity, particularly for antlerless animals in some hunting districts, since FWP is only able to manage the prey side of the equation. At this time, FWP cannot predict if, when, or how significant those changes might be. It is also possible that hunter opportunity for antlerless animals may increase in the future to meet other management objectives.

Other Wildlife. Some wildlife species would benefit from implementation of this alternative because the gray wolf is an important link in the food chain. In addition, wolf predation tends to remove old, sick, or debilitated animals from the population, although this is not always the case because wolves also kill young and healthy animals. Wolf kills are visited by a wide variety of scavenging species which directly benefit from this food source on a year round basis. The presence of wolves is also thought to enhance ecosystem functioning by changing ungulate habitat use patterns. Other wildlife species may be impacted directly through predation or indirectly through competition for food resources or space. For example, some local mountain lion populations may decline in the general vicinity of wolf pack territories. The magnitude of these positive and negative consequences are difficult to predict, but are expected to occur on a localized level where wolves become established. Nonetheless, FWP would have limited influence to mitigate or enhance impacts to other wildlife because it would not be the lead agency managing the wolf population.

ESA also directs the USFWS wolf program to consult with other USFWS recovery programs to be sure that recovery of one species is not jeopardizing recovery of another. Under this alternative, these internal consultations must continue because the wolf is still listed.

Human Environment

Social Factors. Wolf restoration has been a divisive issue among Montanans. While some Montanans supported recovery, others opposed it. People in northwestern Montana are becoming accustomed to wolves since they have been present going back to the mid 1980s. Elsewhere in Montana, citizens are still adjusting to the presence of a newly introduced population. This alternative would lead to the largest

estimated wolf population of the five considered. For those individuals opposed to the presence of wolves in Montana and/or their management by USFWS, this alternative represents the largest negative impact on social and cultural values. Conversely, individuals supportive of wolf presence in higher numbers and conservative management philosophies would receive the greatest positive social benefit.

Because USFWS administers the program, the diverse interests and needs of all Montanans would not necessarily be taken into consideration or addressed in a proactive fashion due to some of the constraints imposed by federal regulations. Nonetheless, USFWS would take action to alleviate conflicts between wolves and people or livestock where and when they develop.

Public Outreach. Current public outreach efforts may not adequately meet future needs as the wolf population increases and wolves colonize new habitats. The federal wolf program does not have dedicated personnel to fulfill the public's need for information and educational materials. Staff biologists fulfill this need as a part of their other assigned duties. WS may fulfill some of the increasing needs through its technical assistance efforts with livestock producers.

Human Safety. People may encounter wolves more frequently. In the presence of an immediate threat to themselves or another person, people could harass, injure, or kill wolves. USFWS may harass or kill wolves that threaten human safety. Individuals who injure or kill a wolf in the absence of a direct and immediate threat could be subject to federal prosecution. At the present time, people are not able to defend their domestic pet or livestock herding or guarding animals if it is threatened or attacked by a wolf in the experimental area. However, new rules in the Northwest Montana Recovery Area allow a citizen to injure or kill a wolf in the act of attacking dogs and livestock herding and guarding animals. The reader is referred to USFWS (2003a) for additional information.

Private Property. USFWS did not need to restrict uses of private land to recover wolves in the northern Rockies. Restrictions on behalf of a biologically recovered population would also be unnecessary. While wolf use is primarily on public lands, some use of private lands does occur. Use of private lands will undoubtedly increase in the future with increasing wolf numbers.

A larger wolf population under this alternative could result in more conflicts and a greater management burden on private property owners, WS, or USFWS to resolve conflicts. If not under immediate voice command, lion hounds or bird hunting dogs may be injured or killed in wolf encounters. The economic impacts of wolf-livestock conflicts are addressed below.

Economics / Livelihoods

Livestock Depredation. Chapter 2 (Existing Environment) provides a detailed discussion of the recent history of confirmed livestock depredation in Montana. In economic terms, the total lost value per year is equal to the estimated number of lost animals per year times the market value of those animals. From 1986-2001, the average number of cattle and sheep killed per wolf per year was 0.154 and 0.1752, respectively. Actual historical livestock losses to wolves may be underestimated due to the difficulty in identifying the exact cause of death. The extent to which the number of confirmed livestock losses underestimates total livestock losses is unknown. To account for this, probable losses were estimated at 0.093 cattle and 0.015 sheep per wolf per year, and these estimates were added to the confirmed loss estimates. Assuming that all probable losses are actually due to wolves probably overstates actual losses. Nonetheless, that assumption was made on account of the uncertainty about what actual losses might be. Wolves also occasionally kill horses, llamas, or guarding dogs. These losses, while sporadic and difficult to predict, do result in economic loss. Therefore, these economic losses are incorporated as a percentage of the total compensation payments based on historical data.

Approximately 132 cattle and 150 sheep per year would be lost to confirmed wolf depredation. Another 79 cattle and 13 sheep could be lost to probable wolf depredation (Table 31). Losses to other predators are greater than the predicted losses due to wolves, but the combined totals may be of concern. From 1990-2000, an average of 21,500 sheep and lambs per year were killed per year by coyotes in Montana (USDA 2002). In 1995, approximately 1,100 calves were killed by coyotes (USDA 2002). In YNP, the coyote population was reduced by 50% in areas where wolves established territories (Crabtree and Sheldon 1999). Outside YNP, it is not known to what extent wolves will reduce coyote populations under the wolf densities projected by the various alternatives. It is possible that wolves could displace coyotes in some areas grazed by sheep and that coyote predation on sheep may decline. However, it is not clear whether wolves will be tolerated in sheep ranching areas.

The average value of all cattle in Montana was $850 per head, and the average value of all sheep was $94 per head as of January 1, 2001 (Montana Agricultural Statistics Service 2002). Purebred lines may, in fact, have a significantly higher value, while other animals may have a significantly lower value than this average. While value per animal has declined recently, over the last 10 years it has remained relatively stable in real dollar terms. These values are projected to remain stable in real dollar terms (corrected for inflation) out to 2015. These values are similar, but differ slightly from actual payments from the Defender's of Wildlife Compensation Fund because the latter are individually negotiated.

FWP predicts that in 2015, gray wolves in Montana would be responsible for about $210,499 in total livestock depredation losses per year (confirmed, probable, and other) (Table 31). The total costs associated with wolf depredation losses are likely to be smaller during the early years of implementation due to a smaller wolf population. Other expenses of livestock industry include increased management costs due to changes in husbandry practices or materials associated with improving the physical security of animals such as night pens or electric fencing. These costs are difficult to estimate and have not been quantified. Presumably ranchers already incur some management costs to mitigate for predator losses.

The estimated annual livestock depredation losses for this alternative are small compared to either the statewide value of annual sheep and cattle production or to the level of annual livestock losses to predators other than wolves and to natural causes. But wolf losses are not spread evenly among all Montana livestock producers or shared by the industry as a whole. These losses are borne by individual livestock producers and in fact, the losses may be significant in proportion to the size of the operation. Additionally, these losses represent new, added risk to some livestock producers because of where they are located geographically with respect to wolf distribution.

Under this alternative, livestock producers have some assurance that Defenders of Wildlife will continue to pay for confirmed losses since the gray wolf stays listed. However, this program is provided voluntarily and is sustained through private donations. It could be discontinued at any time. If Defenders of Wildlife were to cover the predicted confirmed cattle and sheep losses in 2015, the cost would be about $126,300. Other economic costs, such as probable losses or expenses from enhanced husbandry, would still be borne by the individual livestock producer.

This alternative predicts some of the highest future cattle and sheep losses of any alternative. There may be more wolf-livestock conflicts in the absence of a proactive management program which fine-tunes wolf numbers and distribution. Individual livestock producers and USFWS will incur higher direct and indirect management costs to avoid and resolve wolf-livestock conflicts. This alternative could also foster the expectation that there should be radio collars present in every pack so they can be easily found. Under this alternative, landowners could have a greater risk of losses in the absence of changes on their part as wolves increase in number and distribution.

Big Game Hunting. At the statewide level, wolf management under this alternative is not expected to cause significant changes in hunting activity beyond the increases and decreases observed since 1990. Greater changes at the local hunting district level are more likely, but will probably be caused by a suite of factors that includes the presence of wolves. FWP cannot predict the magnitude of local impacts. Table 32 shows the historical variability in elk, deer, and moose hunting participation from 1990-2001 at the statewide level. Changes between 2003 and 2015 should not exceed what is shown. Note that hunter participation could also increase because of changes in regulations to increase harvest, thereby reducing populations to accomplish other management goals.

Table 31. Estimated livestock losses (confirmed and probable) and the economic value of livestock and domestic animal losses in the year 2015 for Alternative 1 (No Action).

Type of Loss	Number of Animals Lost	Value per Head[a]	Total Value of Loss
Confirmed Cattle	132	$850	$112,200
Confirmed Sheep	150	$94	$14,100
		Confirmed Total Value	$126,300
Probable Cattle	79	$850	$67,150
Probable Sheep	13	$94	$1,222
		Probable Total Value	$68,372
		Total cattle and sheep losses	$194,672
		Estimated Loss of Other Domestic Animals[b]	$15,827
		TOTAL ESTIMATED ANNUAL LOSS	$210,499

[a] Average value of all sheep and lambs and all cattle, 2001 Montana Agricultural Statistics.
[b] Historically, Defenders of Wildlife compensation payments for other domestic animals (guarding dogs, horses, or llamas) was 8.13% of the total payments for cattle and sheep.

Regional Economic Activity. From a statewide perspective, economic theory suggests that nonresident hunter expenditures impact the Montana economy by bringing additional dollar expenditures into the state. Increasing or decreasing levels of resident hunting and hunting-related expenditures will not impact the overall state economy. This is because as residents, these hunters will likely spend the money they did not spend hunting in some other sector of Montana's economy. In other words, changes in hunter opportunity and participation are not anticipated to affect the proportion of income that consumers statewide spend on average for all goods and services combined.

While changes in resident hunter spending patterns within Montana will not substantially impact total statewide economic activity, these changes may impact certain geographic areas and businesses. For example, if big game populations in a popular area were to decline due to wolf predation or some other cause, resident hunters might shift their effort to other areas. This shift could negatively impact the local economy in the area experiencing the loss of hunters and positively impact the areas gaining hunters. While the statewide net impact could be near zero, there could be changes in local communities. Given the current uncertainty about the degree, scale, or areas in which wolf restoration has significantly impacted big game populations and hunter effort to date, it is difficult to estimate the likelihood or extent of these types of regional impacts.

Each year, nonresidents spend significant amounts of time and money hunting big game within the state (Chapter 2). The state's economy could be impacted by a reduction in nonresident hunting if management led to a decline in nonresident hunter opportunity. However, nonresident hunter opportunity is almost entirely driven by policy decisions rather than environmental factors. For example, nonresident elk licenses are capped at 17,000. Due to significant excess demand by nonresidents for elk hunting in Montana, the maximum number of nonresident licenses has been sold since at least 1990. State policy also guides the number of deer licenses, antlerless elk permits and moose permits available to nonresidents. FWP does not anticipate reducing nonresident big game hunting opportunity under this alternative.

The number of big game, deer, and deer B licenses available to nonresidents from 1990 to 2000 in shown in Table 33. The slight changes are primarily due to a policy decision to use market prices to achieve a given target number of licenses sold in some license categories. Most of the changes through time occur in the outfitter-sponsored category. Depending on year-to-year changes in the interaction between price and hunter response, nonresident prices are set at levels so that the target number of licenses will be sold on average over a five year period. In some years, the target will be exceeded, but sales will fall short in other years if the price is set too high.

Outfitting Industry. Nonresident hunter expenditures and opportunity to hunt big game are not expected to change under this alternative because nonresident licensing opportunities are established by policy and/or pricing. This implies that there will be no impacts to the outfitting industry on a statewide basis because the primary clientele seeking those services are nonresident hunters (Chapter 2). However, individual big game outfitters could be negatively impacted if a specific ungulate herd segment within their allowable hunting area were displaced due to wolf presence or the local herd was disproportionately reduced by wolf predation or a combination of wolf predation and other environmental factors. Hunter success rates are an important marketing tool and some outfitters may experience declines in nonresident bookings. Data to analyze the potential impacts to specific outfitters are currently lacking. The extent or likelihood of such an area-specific impact is unknown.

Table 32. Range of potential change in the number of hunters, hunter days, and opportunity for deer, elk, and moose between 2003 and 2015 based on the historic range of variation (+/- 1 standard deviation from the long term average 1990-2001).

Species	Statewide Number of Hunters	Statewide Hunter Days	Hunter Opportunity
Elk	+/- 4,066	+/- 47,236	+/- 4,274 (number of antlerless permits)
Deer	+/- 16,798	+/- 102,164	+/- 8,333 (antlerless harvest)[a]
Moose	+/- 46	+/- 781	+/- 56 (total number of permits)

[a] Hunter opportunity for deer is reported as total antlerless harvest because hunters can harvest antlerless deer several different ways: the general deer license, a deer B license, and an over the counter permit.

Recreational Values

Hunting Values. Wolves have the potential to affect several kinds of recreation in Montana including hunting and tourism. The economic values that an individual places on these recreational experiences, beyond any amount they actually spend, have been estimated on a per trip or per day basis in a number of studies (Chapter 2).

The estimated net economic value for elk hunting is $109 per day (in 2002 dollars), $74 for deer hunting, and $242 for moose hunting (King and Brooks 2001, Duffield and Neher 1990, and Brooks 1996, respectively). Given the variation in the number of hunter days for elk, deer, and moose hunting observed from 1990-2001, total net economic value of big game hunting would also vary year to year. Total net economic values of hunting would be expected to mirror how hunting participation changes in light of the wolf management program described by this alternative and the other factors influencing hunter behavior.

In recent years, some evidence indicates that net economic values per trip for hunting have increased in real terms (King and Brooks 2001). However, there is not enough evidence to reliably predict this trend out to 2015. Therefore, the net economic values per day (or per trip) presented in Chapter 2 are assumed to be constant in real terms (corrected for inflation) over the foreseeable future.

Table 33. Number of licenses sold to nonresidents (NR) for a variety of deer and elk hunting opportunities, 1990-2000.

Year	NR-Big Game Combo General	NR-Big Game Combo Outfitter	Total NR Big Game Combo	NR- Deer Combo General	NR-Deer Combo Outfitter	NR-Deer Combo Landowner	NR-Deer Combo Total	NR-Deer B Licenses
1990	11424	5576	17000	2000	2000	2000	6000	--
1991	11400	5600	17000	2000	2000	2000	6000	--
1992	11400	5600	17000	2000	2000	2000	6000	--
1993	11400	5600	17000	2000	2000	2000	6000	--
1994	11400	5600	17000	2000	2000	2000	6000	--
1995	11400	5600	17000	2000	2000	2000	6000	--
1996	11500	5500	17000	2300	3114	2000	7414	14002
1997	11500	5500	17000	2300	2395	2000	6695	11737
1998	11500	5500	17000	2300	1994	2000	6294	8780
1999	11500	5500	17000	2300	2143	2000	6443	5320
2000	11500	6229	17729	2300	2304	2000	6604	6243

Source: Montana Department of Fish, Wildlife and Parks License Sale Comparison Records.

Wildlife Viewing and Recreational Trip Values. Wolves are charismatic and garner the public's interest nationwide. Many people value the opportunity to see or hear wolves, or simply to recreate in areas where wolves are present (Duffield 1992, Duffield et al. 2001). The reintroduction of wolves to YNP demonstrated the potential for strong links between visitor experiences, visitor spending, and the presence of wolves in an ecosystem. Since the 1995 reintroduction, a significant amount of recreational and economic activity has developed specifically around viewing and listening to wolves within the park.

YNP's Lamar River Valley provides a unique open setting with excellent viewing opportunities for wolves, grizzlies, and elk. Large numbers of visitors now go to this area in the spring and early summer specifically to see wolves. Over 20,000 visitors have actually seen wolves in the park since reintroduction (R. McIntire pers. comm.). In addition to those park visitors who travel to the Lamar Valley independently, a number of both for-profit and not-for-profit organizations have formed or located near Yellowstone in recent years to provide wolf-watching tours. These operators (including operations out of Bozeman, Gardiner, and Livingston, Montana) charge up to $2,000 per week (J. Williams pers. comm.). Some business owners in Gardiner, Montana target their advertising to "wolf watchers."

It is possible to roughly estimate the economic impact on Montana from wildlife viewing specifically associated with wolves in YNP. Surveys have shown that 3.3% of visitors to YNP would not have made the trip if wolves were not present (Duffield et al. 2001). Of the 1.8 million visitors to YNP per year from outside the tri-state region, approximately 60,000 nonresident visitor trips are due to the presence of wolves.

Although wolf watching can take place throughout the park, it is concentrated in the Lamar Valley. Visitor use in the Lamar Valley is closely tied to the North Entrance (Gardiner, Montana) and the Northeast Entrance (Cooke City, Montana). A conservative assumption is that wolf-watching impacts are instead distributed proportionally to entry through all gates. Given that, about 65% of these wolf-watching visitors (or 39,000 people) enter the park by passing through West Yellowstone, Gardiner, or Cooke City. Expenditures of $293 per nonresident visitor implies a total nonresident expenditure in the Montana economy of $11.3 million per year due to the presence of wolves in YNP (Duffield et al. 2001).

While the experience of YNP and the Lamar Valley suggests that the presence of wolves in an ecosystem can have a strong positive impact on both visitors and a local economy, predicting a similar impact statewide is more difficult. As noted above, the Lamar Valley is a truly unique setting that allows for easy wolf watching in one of the nation's premiere national parks. The extent to which this type of setting and experience might be duplicated elsewhere in Montana is unknown. Despite the presence of wolves for a number of years in northwestern Montana and the Nine Mile Valley, no significant experience similar to that seen in YNP has developed, possibly due to the predominance of forested terrain. A small percentage of visitors to GNP specifically seek wolf-viewing opportunities along the western boundary, home of several wolf packs since the mid-1980s. However, most Glacier visitors gravitate to the spectacular scenery along the Going to the Sun Road.

FWP expects wolf-viewing opportunities to have a positive impact on recreational values in Montana. But at this point, the impact can't be quantified due to an absence of data. For example, we do not know how changes in the number of wolves affect the odds of seeing wolves or how increasing or decreasing viewing opportunities affect expenditures or net benefits. However, it is possible to estimate the number of individuals that may be positively affected. Both residents and visitors enjoy wildlife viewing experiences in Montana every year. The National Fishing and Hunting Survey reported that 341,000 residents age 16 and over (50% of Montana's population) and 511,000 nonresidents participated in wildlife watching in Montana during 2001 (USFWS and U.S. Department of Commerce 2002). Relative to the state population, the number of nonresident wildlife watching participants in Montana (74%) was similar to the estimate for Alaska and greater than that for any other state except Wyoming.

The addition of wolf viewing to the experiential aspect of these trips should positively impact the recreational values of many of these people. The size of the wolf population should be directly related to the positive value accruing to the individuals would seek out wolf viewing or hearing opportunities. As the alternative specifying the largest recovered population, the No Action Alternative would also likely have the greatest potential to positively impact recreational values among the five alternatives examined.

FWP Fiscal Impacts

FWP is primarily funded by user fees and federal excise taxes paid by hunters and anglers. The largest revenue source is the sale of hunting and fishing licenses. Annual license sales generate more than $30 million, $23 million of which is used for day-to-day operations. The balance is earmarked for specific programs like hunter access, conservation easements, and maintenance of property. More than $11 million in federal funds are also allocated to Montana based on formulas that consider the number of paid hunting and fishing license holders and the land and water area of the state.

Nonresidents are assessed higher fees than residents for hunting and angling opportunities. Montana statutes limit the number of licenses available to nonresidents for some hunting licenses. Even though the number of licenses sold is limited, revenues from nonresident license sales account for more than two-thirds of FWP's total license receipts.

How FWP revenue will be affected by each of the alternatives is an important consideration. Trends in license sales for the general elk license and the general deer license are largely influenced by factors such as elk or deer population status, hunter access, changing hunter demographics, or price, and not necessarily the presence or status of a recovered wolf population. However, a recovered wolf population could more directly influence license sales for antlerless elk, deer B licenses, or moose. This is because FWP uses antlerless harvest to fine-tune ungulate population numbers in relation to management objectives. If localized deer or elk populations are negatively affected by wolf predation, hunter opportunity for antlerless animals could decrease. Conversely, if deer or elk populations were not affected by wolf predation and actually exceeded management objectives, opportunity for antlerless harvest would increase. Similarly, a recovered wolf population could more directly influence moose sales because all moose hunting is limited to permit-only opportunities. It is difficult to predict how antlerless opportunity will change in the future under this alternative.

Therefore, fiscal impacts to FWP are estimated based on the observed historic variation in statewide licenses sales due to all causes for antlerless elk permits, Deer B licenses, and moose permits. The FWP Commission establishes final quotas for these licenses and permits. Revenue derived from these sales will change in proportion to the historic variation in past availability and sales from 1990-2001. Table 34 summarizes the lower and upper bounds for the number of licenses/permits that would probably be available in 2015 and the revenue generated by selling them. Several assumptions were made and are footnoted. A major assumption is that prices are constant in real terms. But in fact, nonresident prices have increased significantly in the past decade.

Administration, Funding, and Legal Status

Under this alternative, FWP's role consists of informal consultation, with limited influence over wolf management outcomes. All decisions are made by USFWS and no significant administrative demands are expected for FWP. USFWS decisions would be made primarily at the local level, but the northern Rockies program is also guided by policy established within the national scope of wolf recovery. USFWS would still be required to consult with private individuals or businesses and other federal agencies under Section 7 of ESA.

Because the program remains with USFWS, the adequacy of future budgets is less certain. The Northern Rockies Wolf Recovery Program would be competing against other national interests and priorities to secure adequate funding and staff. Because the program is federal, budgeting is still accomplished through Congressional appropriations. Thus, adequate staffing to meet the needs of Montanans most

Table 34. Expected variation in FWP revenue from the changes expected in statewide license sales of antlerless elk permits, Deer B licenses, and moose permits in 2015, based on 2002 prices.

Species	Average Number Available 1990-2001 (1 standard deviation of the average)	Lower Bound of Availability	Upper Bound of Availability	Expected Variation in Revenue
ELK[a]				
	Antlerless Permits: 33,359 (+/-4,274)	29,085	37,633	
	Residents: 92% of 4,274 @ $19[b]			+/- $74,709
	Nonresidents: 8% of 4,274 @ $3			+/- $1,026
MOOSE[c]				
	Antlerless Permits: 687 (+/-56)	631	743	
	Residents: 97% of 56 @ $75			+/- $4,074
	Nonresidents: 3% of 56 @ $750			+/- $1,260
DEER[d]				
	Antlerless Harvest: 31,729 (+/-8,333)	23,396	40,062	
	Residents: 87% of 8,333 @ $8			+/- $57,997
	Nonresidents: 13% of 8,333 @ $75			+/- $81,247
TOTAL EXPECTED VARIATION IN REVENUE				+/- $220,313[e]

[a] Antlerless elk permits can only be obtained through the drawing. Nonresidents must have a valid B-10 license obtained through the big game combo drawings. These drawings are capped at 17,000 maximum with waiting lists are kept for any opportunities that may become available after the drawing. FWP assumed that the 17,000 cap would continue to be met. If desired, the successful nonresident may apply for an antlerless elk permit. From 1998-2001, approximately 8% of sales were to nonresidents and 92% of sales to residents.

[b] Because a general elk license is required to receive a special permit, FWP assumed that changes in permit availability would also affect general elk license sales. Expected variation in resident and nonresident permits is based on an assumption of simple apportionment of statewide variation to the residency classes. This procedure slightly understates the resident and nonresident variation estimates.

[c] Moose permits are only obtained through the drawing. The 10% maximum allocation to nonresidents is applied. However, from 1998-2001 about 3% went to nonresidents and 97% to residents. The 10% maximum is not guaranteed to nonresidents during the drawings; nonresidents compete equally with residents.

[d] Hunting opportunities for antlerless deer will be managed through quotas for Deer B antlerless licenses. Both residents and nonresidents may purchase these licenses either through the drawing or over the counter. Over the four-year period 1998-2001, approximately 13% of sales were to nonresidents and 87% to residents. The 10% maximum is lifted if residents have not purchased enough licenses to manage the populations.

[e] The total expected variation in revenue overstates the true statistical variation of this sum.

directly affected by the presence of wolves is not assured. The expected shortfall in personnel and budgets to meet those needs could be problematic for Montana, particularly as needs in Idaho and Wyoming increase, too. WS costs will likely increase due to the higher number of wolves in more areas.

Because the gray wolf would still be protected under ESA, federal rules and regulations apply. Federal authorities, not state authorities, would prosecute violations of federal law or regulations. However, the gray wolf would remain listed as endangered under state law.

In addition to the existing fluctuations in license sales, FWP would incur up to $5,000 in administrative costs associated with informal consultations with USFWS. These expenditures would come out of the existing budget for the endangered species program. No new revenue would be generated through license sales for regulated harvest of wolves.

Physical Environment

No impacts to air, soil, or water resources are predicted under this alternative. Vegetation may be affected to the extent that wolf presence changes ungulate grazing patterns in localized areas (National Research Council 2002). Although wolf hair may capture and later redistribute noxious weed seeds, compared to other methods of seed dispersal, this will not be significant. No archeological sites would be disrupted by this alternative.

Short Term, Long Term, and Cumulative Effects

In the short term, this alternative represents the status quo. Impacts are primarily associated with livestock losses due to wolf depredation. Localized impacts to prey populations, individual outfitters, or individual businesses may also develop in the short term. Wolf numbers and distribution would increase in the absence of more proactive strategies. Hunter opportunity will continue to fluctuate through time for a variety of reasons, which may include wolf predation. The fluctuations may be more significant in localized areas due to locally high densities of wolves. The public and political debate over wolf restoration and subsequent management may become even more conflicted because wolves would still be listed under ESA, even though the northern Rockies population had achieved the biological recovery goal. Wolf recovery issues in the northern Rockies would still maintain their national scope and controversy. Federal resources utilized by the northern Rockies program would not be available for recovery efforts of other rare or more imperiled species. Social tolerance may decline in Montana and illegal killings may increase. The confusion over agency jurisdiction and management responsibility of an expanding population may continue. The cumulative impacts of FWP not preparing a management plan are borne by the Montana citizens more so than FWP. Some citizens' interests and needs may not be met as responsively or proactively as desired.

Mitigation

Because FWP would have very little participation in wolf management, there is little that FWP could do to mitigate the negative impacts of this alternative directly, except to encourage USFWS to adjust the program. Examples would be to request that USFWS increase the Montana-based staff and increase the budget to maintain effective monitoring of the expanding population and to respond to conflicts. FWP could also encourage USFWS to adopt more flexible regulations both for agencies and livestock producers. Livestock producers themselves could decrease their risk of wolf depredation by adapting certain management practices, although the risk can never be fully eliminated. USFWS and WS could devote more effort proactively towards preventing wolf depredation on livestock. Livestock losses would

be partially mitigated by compensation payments made by Defenders of Wildlife. Defenders of Wildlife may also cost-share a portion of the expenses associated with changes in husbandry.

FWP could more directly mitigate for localized impacts to ungulate populations by decreasing hunter opportunity, particularly for antlerless animals. In so doing, FWP would attempt to dampen a population decline or hasten a population increase. FWP could also augment ungulate populations from other sources.

Irretrievable Commitments

Wolves will be present in Montana, and under this alternative, USFWS retains management authority. That commitment is irretrievable until FWP restarts the planning process. In the mean time, USFWS commits resources that could have otherwise been allocated to recovering other imperiled species. FWP would commit some administrative staff time to informal consultations with USFWS that could otherwise be devoted to other activities.

Some wolves will kill livestock. Even though wolves are not expected to have a significant effect on the livestock industry as a whole, some individual livestock producers could sustain substantial losses in a given year. The number of depredations will likely vary widely among years, but over the long term some livestock losses will be an irreversible commitment of resources. Any compensation paid by private groups to livestock operators will be irretrievable by the group paying the compensation.

Alternative 2. Updated Council, *FWP's Preferred Alternative*

For comparison, the environmental consequences of this and the other alternatives are presented in a summary at the end of this chapter (Table 43).

Biological Environment

Wolf Management. FWP would implement an adaptive approach to manage wolves in Montana. The adaptive management trigger that would allow FWP to move from conservative to liberal management tools and vice versa is 15 breeding pairs (federal recovery definition). If the wolf population increases at the low rate, liberal management tools could be implemented starting in 2006. If the population grew at the higher rate, liberal management tools could be implemented in 2004. It is possible that the adaptive management trigger would be reached before 2004 or 2006, depending on how fast the population actually grows. Wolf numbers and pack sizes would be managed proactively to meet the needs of wolves and people. Most importantly, wolf management would be integrated into the larger wildlife program and managed in an ecological context similar to other large carnivores. Conservation and management measures of this alternative would secure the wolf population into the future.

To that end, some packs, such as those occurring in mixed landownership patterns interspersed with livestock, will require more management attention. Other packs, such as those in remote public land areas, would require less attention. Resolution of conflicts would be incremental, depending on where the territory is located and the degree, frequency, and types of conflicts that occur with livestock, people, or prey.

Wolves would be managed as a "species in need of management" which grants full legal protection from indiscriminant human-caused mortality. However, wolves could still be harassed, injured, or killed through agency control actions and by private landowners or livestock owners under certain permitted

conditions. When the number of breeding pairs exceeds 15 and it becomes biologically sustainable to do so, FWP would introduce regulated harvest as a proactive management tool to adjust wolf numbers and distribution in relation to their local environment.

Wolf Numbers and Distribution. Approximately 328-657 wolves (or 27-54 breeding pairs according to the federal recovery definition) would be present in Montana in 2015. This is fewer than Alternative 1 (No Action). FWP expects the population to be near the lower end of the range. It is possible that the number would be less than 328 if the population grows more slowly than predicted. Wolf numbers will fluctuate because of management actions, changes in prey density and distribution, disease, and intraspecific competition. Wolf numbers will not be administratively capped, but will be managed adaptively in keeping with solid principles of wildlife management and the factors affecting social tolerance. This population would be secure and still allow flexibility for FWP, without worrying about whether the population would drop unexpectedly close to the relisting level due to unforeseen events.

Wolf distribution will increase as individual wolves disperse from core areas and colonize new habitats with sufficient prey. Wolves will probably be distributed primarily in western, west central, and south central Montana, although wolves could also expand their distribution into eastern Montana in the absence of significant social conflicts, much as mountain lions did over the last 20 years. For example, wolves could become established in island mountain ranges, such as the Big and Little Snowies or even farther east if there is an adequate prey base and little social conflict. Wolf densities would be lower because prey densities are typically lower. Ultimately, the complex biological and social environment, rather than administrative zones, would guide distribution. Wolves would be encouraged on remote public lands and integrated into mixed land ownerships. Wolves would be allowed on FWP WMAs. This is consistent with existing policies that these lands were purchased to benefit all wildlife, but that they be managed with particular attention to wintering big game.

Wolf Habitat, Connectivity, and Land Management. Connectivity requirements are met because the wolf population should provide an adequate number of dispersers that emigrate to Idaho, Canada, or Wyoming. Furthermore, wolves coming to Montana from these other areas should have a greater chance to join an existing pack or locate other dispersers to start a new pack. FWP would continue to participate in technical discussions with land management agencies and the Montana Department of Transportation about habitat connectivity issues for wide ranging carnivore species. Public land management activities, whether logging, grazing, or travel management are not affected by this alternative, although land management agencies may adopt policies or make changes for other management purposes. Land managers may adopt localized area closures around dens or rendezvous sites, particularly within national parks. FWP would continue to work with land management agencies and private landowners on projects to enhance wildlife habitats.

Monitoring. Through the monitoring program, FWP will ensure that the Montana population is secure and above the recovery goal. It is also an important component of the adaptive management framework so that FWP can evaluate the effects and outcomes of management decisions. This new information will also improve management decisions. The monitoring program will also allow FWP to document wolf activity in new areas as well as the status of existing packs. This in turn, will allow FWP to more closely monitor certain ungulate populations or to coordinate more closely with land managers or private landowners.

During the first five years of implementation, FWP will monitor the Montana wolf population and tabulate the number of breeding pairs according to the federal recovery definition and the more general definition of social groups (four or more traveling in winter). If the more general definition adequately demonstrates reproduction and the security of Montana's gray wolf population and that the number of breeding pairs in Montana satisfies the legal requirement, FWP will adopt the more general definition.

Furthermore, FWP will reduce monitoring intensity for some packs in remote areas that have a small likelihood of causing conflicts. This would allow personnel to focus more monitoring effort on other packs with a higher probability for conflict. The monitoring budget would also be used more effectively or even be decreased to meet wildlife monitoring needs for other species.

Monitoring responsibilities for boundary packs would be shared between FWP and the adjacent jurisdiction. Additional administrative time will be required to share information or coordinate field activities.

Prey Populations. At the regional and statewide scale, prey populations will fluctuate through time due to all causes of mortality (e.g. predation, natural mortality, human hunting, habitat conditions, and weather events) similar to the historical patterns described in Chapter 2 (Existing Environment). At a localized level, prey populations may be more influenced by wolf predation, particularly in combination with predation by other large carnivores. Predation pressures may exaggerate a population decline initiated by unfavorable weather events or even slow population recovery, particularly if human harvest rates of antlerless animals are too high. Localized prey populations may even stabilize at a smaller level. Wolf predation on small ungulate populations, even if infrequent, may be more influential on population trend than for larger ungulate populations because predation may remove a greater proportion of the herd.

Under this alternative, FWP would be able to manage gray wolves and ungulates in an integrated, ecological manner and within the context of other environmental factors. If a local prey population were significantly impacted by wolf predation in conjunction with other environmental factors, FWP would consider reducing wolf pack size. If there were fewer than 15 breeding pairs, relocation would be considered. If there are more than 15 breeding pair, FWP will reduce pack size through liberal management tools, which could include regulated hunting or trapping. Wolf management actions would be paired with other corrective measures to reduce ungulate mortality or enhance recruitment such as decreasing hunter opportunity for antlerless animals.

FWP would not significantly change the principles and philosophies guiding ungulate population management in response to the added management authority for the gray wolf. Ungulate management will continue to be based on the best available scientific information and the established management objectives. FWP actions under this alternative would improve how ungulate and carnivore populations are managed overall because monitoring programs would be improved and FWP would have management authority for both an important predator species and its prey.

Other Wildlife. Some wildlife species would benefit from implementation of this alternative because the gray wolf is an important link in the food chain. In addition, wolf predation tends to remove old, sick, or debilitated animals from the population, although this is not always the case because young and healthy animals are also vulnerable to wolf predation. Wolf kills are visited by a wide variety of scavenging species which directly benefit from this food source on a year round basis. The presence of wolves is also thought to enhance ecosystem functioning by changing ungulate habitat use patterns. Other wildlife species may be impacted directly through predation or indirectly through competition for food resources or space. For example, some local mountain lion populations may decline in the general vicinity of wolf pack territories. The magnitude of these positive and negative consequences are difficult to predict, but are expected to occur on a localized level where wolves become established. By having management authority for the gray wolf, FWP could more thoroughly integrate and account for the needs of the other wildlife species that it is charged to manage and conserve.

Human Environment

Social Factors. Wolf restoration has been a divisive issue among Montanans. While some Montanans are supportive of wolf presence, others are totally opposed. Still others are supportive so long as the needs of those most affected by wolf presence are addressed and as long as the program balances the needs of wolves and people. There are also differing opinions about who should be the lead agency and whether wolves should stay listed in perpetuity. People in northwestern Montana have largely adjusted to wolf presence since wolves have been in the area going back to the mid 1980s. Elsewhere in Montana, citizens are still adjusting to the presence of a newly introduced population. The adaptive approach outlined in this alternative would allow FWP to meet the differing management expectations and needs that exist across the spectrum of social values. It incorporates flexibility for landowners, livestock producers, FWP, and provides for a secure wolf population into the future. Most importantly, Montana citizens would have a stronger voice in wolf conservation and management in their state because the program would be administered from a local perspective, rather than a national perspective.

By FWP assuming management responsibility, citizens that perceive wolves as a "cost" are negatively impacted in the sense that FWP would "have to" manage wolves in order to get the species delisted. On the other hand, citizens that perceive wolves as "neutral" or as a "benefit" could be positively affected by the implementation of a proactive, responsive program at the state level. Either way, the alternative calls on the public to accept the legitimacy of FWP to manage gray wolves and that wolf conservation and management will be integrated within the context of modern scientific wildlife management.

Public Outreach. FWP would be able to increase public outreach activities beyond what is possible under Alternative 1 (No Action) because FWP has dedicated personnel to fulfill public information and educational needs. These personnel are also distributed throughout the state. Public awareness and improved understanding about the conservation and management program should decrease the emotional controversy, improve communications with the public, increase public acceptance of the program, and improve management decisions. The public's safety would be enhanced because FWP could more effectively provide information about the dangers of habituating wolves and safety tips about what to do during encounters.

Human Safety. People may encounter wolves more frequently as the population increases in number and distribution. In the presence of an immediate threat to themselves or another, a person may legally harass, injure, or kill wolves under state law. FWP, WS, or local authorities may harass or kill wolves that threaten public safety. Individuals found to injure or kill a wolf in the absence of a direct and immediate threat or otherwise outside the provisions of Montana law would be prosecuted under state laws. Upon delisting from the federal and state lists, Montanans will be able to defend their domestic dog if it is being attacked or killed by a wolf. Overall, public safety will be enhanced through timely agency response and discouragement of wolf habituation.

Private Property. FWP does not intend to restrict private property uses to manage a recovered wolf population. While wolf use is primarily on public lands, some use of private lands does occur. Use of private lands will undoubtedly increase in the future with increasing wolf numbers. FWP acknowledges that wolves will use public lands in close proximity to private property. Use of private lands will increase in the future with increasing wolf numbers, and conflicts may occur more frequently.

FWP would proactively work with landowners to address their concerns about wolf use or to provide technical assistance. FWP and WS would attempt to remove problem wolves in a timely, efficient manner according to the adaptive management tools outlined in this alternative. Resolution may result in the harassment or killing of wolves by agencies or by the landowner, under certain permitted conditions. In some circumstances, wolves could be injured or killed by private citizens in defense of livestock or

domestic dogs. If not under immediate voice command, lion hounds or bird hunting dogs may be injured or killed in wolf encounters. The economic impacts of wolf-livestock conflicts are addressed below.

Economics / Livelihoods

Livestock Depredation. Approximately 328-657 wolves would be present in Montana in 2015. Liberal management tools would be implemented in 2006 if the population grew at the lower rate. If the population grew at the higher rate, liberal tools would be implemented in 2004. Liberal management tools are specifically intended to decrease livestock depredations and allow livestock owners to harass wolves opportunistically, kill wolves caught attacking, killing, or threatening their stock, or receive a special kill permit to remove a wolf or wolves causing chronic conflicts. Because of this increased flexibility for livestock producers, FWP expects the depredation rate under this alternative to be about one half of historical depredation rates. Additionally, adaptive management of the overall wolf population, combined with removal of problem wolves, should result in lower livestock losses and greater social tolerance (see Haight et al. 2002). The increased emphasis on working with landowners proactively to minimize the risk of depredation is intended to decrease the overall losses.

Approximately 25-51 cattle and 29-58 sheep would be lost to confirmed wolf depredation in 2015. Another 16-31 cattle and 3-5 sheep could be tallied as probable wolf depredation (Table 35). These numbers reflect the assumption that liberal management tools would reduce the potential losses by 50%, compared to the losses per wolf in Alternative 1 (No Action). Liberal tools may actually reduce the potential more or less than 50%. These losses are less than those predicted under Alternative 1 (No Action). FWP and WS would proactively work to minimize the potential for depredation through technical assistance. Losses are likely to be less during the early years of implementation because the wolf population would be smaller.

Whenever the adaptive management trigger of 15 breeding pairs is exceeded, FWP intends to implement a variety of more liberal management tools. These include regulated harvest to help proactively manage total wolf numbers in the population (and the number of wolves per pack by default) and removal of problem animals. These tools are paired with the increased work by FWP, WS, and others to provide technical assistance to private landowners to minimize their risks to the extent possible. These strategies combined reduced depredation by at least 70% and decreased economic losses in a computer simulation model examining a variety of animal damage control strategies for wolves in the Great Lakes (Haight et al. 2002). FWP does not believe that field results in Montana would mimic computer-generated results. However, the results of the study did suggest that the combination of voluntary proactive changes to agricultural practices, in combination with proactive agency management of the number of wolves in the population, and removal of depredating wolves would reduce depredation losses significantly.

Montana Agricultural Statistics Service (2002) reports that, as of January 1, 2001, the average value of all cattle in Montana was $850 per head. Sheep averaged $94 per head. Purebred lines may, in fact, have a significantly higher value, while other animals may have a significantly lower value. The predicted economic loss for confirmed livestock depredation, probable depredation, and loss of other domestic animals is $40,935 - $81,770 (Table 35). This is less than the predicted economic losses for Alternative 1 (No Action). Adaptive management of the overall wolf population, combined with removal of problem wolves, should decrease economic losses (see Haight et al. 2002). Livestock producers may incur other expenses, including increased management costs due to changes in husbandry practices or materials to improve the physical security of animals (e.g. night pens). These costs are difficult to estimate and have not been quantified. Presumably, livestock producers already incur some management costs to mitigate for predator losses.

The estimated annual livestock depredation losses for this alternative are small compared to either the statewide value of annual sheep and cattle production or to the level of annual livestock losses to predators other than wolves and to natural causes. But wolf losses are not spread evenly among all Montana livestock producers or shared by the industry as a whole. These losses are borne by individual livestock producers and the losses may, in fact, be significant in proportion to the size of the operation. And, these losses represent a new, added risk to some individual livestock producers, depending on where they are geographically in relation to wolf pack territories. Under this alternative, livestock producers are assured that FWP will work toward securing a source of compensation funding or livestock insurance.

Big Game Hunting. Same as Alternative 1 (No Action), but localized impacts expected to be less significant.

Regional Economic Activity. Same as Alternative 1 (No Action), but localized changes expected to be less.

Outfitting Industry. Same as Alternative 1 (No Action), but localized impacts expected to be less significant.

Recreational Values

Hunting Values. Same as Alternative 1 (No Action), but localized impacts expected to be less significant.

Wildlife Viewing and Recreational Trip Values. Same as Alternative 1 (No Action).

Table 35. Estimated livestock losses (confirmed and probable) and the economic value of livestock and domestic animal losses in the year 2015 for Alternative 2 (Updated Council). The columns may not sum, due to rounding.

Type of Loss	Number of Animals Lost		Value per Head[a]	Total Value of Loss	
	Low	High		Low	High
Confirmed Cattle	25	51	$850	$21,250	$43,350
Confirmed Sheep	29	58	$94	$2,726	$5,452
			Confirmed Total Value	$23,976	$48,802
Probable Cattle	16	31	$850	$13,600	$26,350
Probable Sheep	3	5	$94	$282	$470
			Probable Total Value	$13,882	$26,820
			Total cattle and sheep losses	$37,858	$75,622
			Estimated Loss of Other Domestic Animals[b]	$3,077	$6,148
			TOTAL ESTIMATED ANNUAL LOSS	$40,935	$81,770

[a] Average value of all sheep and lambs and all cattle, 2001 Montana Agricultural Statistics.
[b] Historically, Defenders of Wildlife compensation payments for other domestic animals (guarding dogs, horses, or llamas) was 8.13% of the total payments for cattle and sheep.

FWP Fiscal Impacts

Fiscal impacts describe the changes in revenue from license sales, the cost of implementing the program, and the potential sources of revenue to fund it. License revenue from antlerless elk permits, deer B licenses, and moose permits could vary by $220,313 annually, the same as for Alternative 1 (No Action). FWP's projected budget to implement this alternative is $872,000 and includes an extra $50,000 specifically for the extra preventative work by FWP, WS, or other cooperators (Table 36). An additional $40,935 – $81,770 is shown for compensation for livestock losses, but FWP monies, matching federal grants for other FWP programs, or state general fund money, would not be used to fund it. The total estimated budget is $912,000-$954,000, not including overhead. FWP would implement this alternative through a combination of state, federal, and private sources. FWP's contribution would be commensurate with its expenditures for other carnivore management programs and would include license revenue, since FWP intends to use regulated wolf harvest as a management tool if it is biologically sustainable. If a regulated wolf harvest were to be implemented, some license revenue would be generated, but the amount can't be predicted at this time. It would depend on how many licenses are sold and the cost of the license. The number of licenses available would be a function of wolf population status, management objectives, and other mortality factors.

Table 36 represents a plausible budget to implement this alternative. The budget reflects the comprehensive nature of designing and implementing a wolf management program. While this budget represents FWP's best projection of the resources required, FWP cannot assess its accuracy until the agency actually assumes management authority and begins implementation. Some components of the wolf program may not be captured fully by this budget. There may also be costs that could not be predicted at this time or were unforeseen.

Administration, Funding, and Legal Status

FWP would be the lead agency for wolf conservation and management in Montana. Decisions are made by FWP, the FWP Commission, or the Montana Legislature. Through an MOU, WS would be an important partner. FWP expects increased consultation with tribal authorities, the states of Idaho and Wyoming, NPS, or others with overlapping interests. This is particularly true for wolf packs that overlap more than one management jurisdiction. FWP will also invest more time in coordination and technical assistance activities with WS, federal land management agencies, private landowners, or other cooperators to proactively reduce the potential for wolf-livestock conflicts. FWP can more thoroughly integrate wildlife management programs by assuming management authority for the gray wolf, even though management decisions may be controversial. USFWS would oversee FWP implementation of the program for five years to ensure that the wolf population would not be in jeopardy of relisting under ESA. Many new wolf management activities fall within existing duties and responsibilities already carried out by FWP or WS. But, some activities would clearly add to existing responsibilities and workloads. Some wildlife biologists, for example, would have new wolf monitoring responsibilities. Some segments of the public will expect the same intense level of monitoring and wolf control currently carried out by the USFWS and WS. FWP field wardens would now investigate potential illegal wolf mortalities. Other changes for wardens and/or biologists may include: working with landowners to address concerns, handling or referring livestock damage calls, responding to wolf sightings and perceived threats to public safety, increased ungulate monitoring effort, addressing hunter concerns and complaints associated with wolves, and responding to reports of injured or road-killed wolves. The FWP Wildlife Laboratory will experience an increased workload associated with processing wolf carcasses, fulfilling wolf health and disease surveillance responsibilities, and filling educational requests. Existing budget and personnel resources cannot absorb this expansion. FWP is also committed to securing adequate supplemental funding and FTE's so that it can meet the public's high expectations without having to divert resources from other equally important programs.

Table 36. Implementation budget for Alternative 2 (Updated Council). Overhead and inflation are not included.

Division / Activity	Estimated Budget
Montana Fish, Wildlife & Parks	
Wildlife Division (Staff 4.30 FTE)	
Biologists (4.0 FTE)	$150,000
Operations	$156,000
Enhanced Ungulate Monitoring	$ 75,000
Wildlife Lab (0.30 FTE)	$ 8,000
Wildlife Lab Operations, Research (contracts, operations, graduate student stipends)	$ 67,000
Total	**$456,000**
Enforcement Division (Staff 2.5 FTE)	
Staff	$ 86,000
Operations	$ 71,000
Total	**$157,000**
Conservation Education Division (Staff 0.75 FTE)	
Information Officer and Headquarters Staff (.75 FTE)	$ 44,000
Operations	$ 10,000
Total	**$ 54,000**
Fiscal, Administration, and Legal (staff 1.0 FTE)	
Fiscal and Administration (0.75)	$ 37,000
Legal (0.25 FTE)	$ 18,000
Total	**$ 55,000**
Proactive, preventative efforts by FWP, Wildlife Services, or other cooperators	**$50,000**
Depredation: Wildlife Services (USDA/APHIS) Cooperative Wolf Damage Management and FWP-directed Predator Control	**$100,000**
FWP ANNUAL TOTAL	**$872,000**
Compensation (money from private source or federal appropriation)	**$ 40,935 – $81,770**
PROGRAM TOTAL (Including Compensation)	**$912,935 – $953,770**

Because FWP needs supplemental sources of funding to implement this alternative, it would be working to secure the funding while the gray wolf is still listed. FWP will pursue all possible funding sources including, but not limited to public/private foundations, special federal or state appropriations, and other private sources.

State laws and FWP administrative rules would now guide management and establish the legal framework. The gray wolf would be removed from the state's endangered species list and reclassified as a "species in need of management." FWP would seek state legislation to make the unlawful taking of a gray wolf a misdemeanor and to include the species under the restitution section of MCA 87-1-111. These changes would allow more effective law enforcement and serve as a greater deterrent to

indiscriminant killing. These changes would be consistent with how black bears and mountain lions are treated in Montana statute.

Physical Environment

Same as Alternative 1 (No Action).

Short Term, Long Term, and Cumulative Effects

During the first five years after delisting, FWP will implement the program but will be overseen by USFWS. Ongoing informal consultation may be required as FWP personnel gain more experience with wolves. The public will also be making that transition as well. Wolf numbers will probably increase and so will wolf distribution. Localized impacts to prey populations, individual outfitters, or individual businesses may also develop in the short term. Hunter opportunity will still continue to fluctuate for a variety of reasons, which may include wolf predation. Livestock losses to wolves will still be documented and increased management costs will still affect individual producers. Over the long term, gray wolves should become more accepted in Montana because the management program is flexible, responsive, and adaptive to people and the wolf population. Conflicted public debate and controversy should decrease because the program is guided by local interests, while still meeting our legal responsibility to maintain a viable population into the future.

Mitigation

One benefit of an adaptive management approach is that it allows FWP to manage the Montana wolf population with a fair degree of flexibility to meet different needs and expectations. To that end, many of the management tools within this alternative are designed to mitigate the potential for negative impacts of a recovered population while, at the same time, maximizing the benefits to the degree possible in a complex environment. The management tools could be applied locally or across a larger area. Wolf numbers and distribution can be adjusted locally to address specific needs, mitigate impacts, or resolve chronic conflicts. Concerns about ungulate populations can also be addressed through the tools identified in this alternative, including enhanced monitoring effort where wolves are established.

Mitigation for the economic losses to individual livestock producers would be enhanced by the increased flexibility and innovative approaches to deter livestock depredations. Providing producers with the flexibility to defend their livestock if a wolf is attacking it, or to receive a special kill permit to resolve a conflict themselves mitigates livestock losses to some degree, but does not eliminate them entirely. Economic losses would still be mitigated to some extent because the State of Montana would create an entity to administrator a compensation program, although it would be funded and independent from FWP. In addition, Defenders of Wildlife or a livestock insurance program could also help address economic costs to individual livestock producers for losses or increased management costs. Adequate funding from outside sources should alleviate most potential FWP fiscal impacts.

Irretrievable Commitments

Under this alternative, FWP would make a commitment to conserve and manage the gray wolf and integrate it within the wildlife program. That commitment would be irretrievable in the sense that FWP does not intend to default on its legal responsibilities to maintain a secure viable population in the future. By assuming the leadership role for wolf management, FWP would be committing staff and financial resources to fulfill the needs of the program. Those resources would be partially unavailable to other program areas to the extent that responsibilities and activities don't overlap.

The adaptive management tools within this alternative will mitigate to a large degree many potentially irretrievable commitments of resources or changes in resource status. However, some wolves will kill livestock. Even though wolves are not expected to have a significant effect on the livestock industry, a few livestock producers could sustain substantial losses in a given year. The number of depredations will likely vary widely among years, but over the long term some livestock losses will be an irreversible commitment of resources. Any compensation paid by private groups to livestock operators will be irretrievable by the group paying the compensation.

Alternative 3. Additional Wolf

For comparison, the environmental consequences of this and all the alternatives are presented in a summary at the end of this chapter (Table 43).

Biological Environment

Wolf Management. Same as Alternative 2 (Updated Council), but FWP's adaptive management approach increases from 15 to 20 the number of breeding pairs (according to the federal recovery definition) that would signal a change from conservative to liberal management tools and vice versa. Because the trigger is raised to 20 breeding pairs under this alternative, it will take longer for the wolf population to reach the trigger compared to Alternative 2 (Updated Council). If the wolf population increases at the low rate, liberal management tools could be implemented starting in 2008. If the population grew at the higher rate, liberal management tools could be implemented in 2006.

Wolf Numbers and Distribution. The statewide population is predicted to be 365-807 wolves (or 30-66 breeding pairs according to the federal recovery definition) in 2015. This is more than Alternative 2 (Updated Council). It is possible that there would be fewer wolves if the population grows more slowly than predicted. This population would be secure and still allow adequate management flexibility for FWP without worrying about whether the population would drop unexpectedly close to the relisting level due to unforeseen events. Wolf distribution would be the same as Alternative 2 (Updated Council).

Wolf Habitat, Connectivity, and Land Management. Most environmental consequences are the same as for Alternative 2 (Updated Council). As a result of increasing the adaptive management trigger to 20 breeding pair, the overall population would be larger and dispersal events should be more frequent. Therefore connectivity among the wolf sub-populations in Canada, Montana, Idaho, and Wyoming should be enhanced above Alternative 2 (Updated Council).

Monitoring. Same as Alternative 2 (Updated Council).

Prey Populations. Same as Alternative 2 (Updated Council). Prey populations are expected to fluctuate through time as described previously. FWP would not change how ungulates are managed in response to the added management authority for the gray wolf. However, under this alternative, more wolves would be present in the population. Therefore, ungulate monitoring efforts would be increased over what was described for Alternative 2.

Other Wildlife. Same as Alternative 2 (Updated Council).

Human Environment

Social Factors. Same as Alternative 2 (Updated Council). But to address the social factors surrounding a state wolf management program, FWP proposes to host an annual workshop and interagency coordination meeting rather than appoint a "standing council." One annual event would be less expensive than multiple meetings throughout the year, so FWP would realize a modest decrease in administrative costs. FWP and other agencies or jurisdictions with overlapping interests could modify management strategies. Communication would be improved between agencies and the public, and more Montanans could be involved in crafting solutions to shortcomings of the program. Some administrative work would be required to organize the meeting as well as to follow up on meeting outcomes and/or implementation.

Public Outreach. Same as Alternative 2 (Updated Council).

Human Safety. Same as Alternative 2 (Updated Council).

Private Property. Same as Alternative 2 (Updated Council).

Economics / Livelihoods

Livestock Depredation. Most of the environmental consequences are the same as Alternative 2 (Updated Council). Owing to the larger wolf population and the 1-2 year delay in implementing liberal management tools, FWP predicts that both confirmed and probable livestock losses will be slightly higher compared to Alternative 2 (Updated Council) but lower than Alternative 1 (No Action). Approximately 28-62 cattle and 32-71 sheep would be lost to confirmed wolf depredation in 2015. Another 17-38 cattle and 3-6 sheep would be lost to probable wolf depredation (Table 37). These numbers reflect the assumption that liberal management tools would reduce the potential losses by 50%, compared to the losses per wolf for Alternative 1 (No Action). Liberal tools may actually reduce the potential by more or less than 50%. FWP and WS would work even more proactively than outlined for Alternative 2 to minimize the potential risk of depredations through technical assistance. Losses are likely to be less than this amount during the early years of implementation because the wolf population would be smaller.

The predicted economic loss for confirmed losses, probable losses and the loss of other domestic animals is $44,917-$99,736 (Table 37). This is less than Alternative 1 (No Action), but more than Alternative 2 (Updated Council). Adaptive management of the overall wolf population, combined with removal of problem wolves, should decrease the number of livestock killed and the resulting economic losses (see Haight et al. 2002). The increased emphasis on working with landowners proactively to minimize the risk of depredation is intended to decrease the overall losses.

Whenever the adaptive management trigger of 20 breeding pairs is exceeded, FWP intends to implement a variety of liberal management tools. These include regulated harvest to help proactively manage total wolf numbers in the population (and the number of wolves per pack by default) and removal of problem animals. These tools are paired with the increased work by FWP, WS, and others to provide technical assistance to private landowners to minimize their risks to the extent possible. These strategies combined reduced depredation by at least 70% and decreased economic losses in a computer simulation model examining a variety of animal damage control strategies for wolves in the Great Lakes (Haight et al. 2002). FWP does not believe that field results in Montana would mimic computer-generated results. However, the results of the study did suggest that the combination of voluntary proactive changes to agricultural practices, in combination with proactive management of the number of wolves in the population, and removal of depredating wolves would reduce depredation losses significantly.

The estimated annual livestock depredation losses for this alternative are small compared to either the statewide value of annual cattle and sheep production or to the level of annual livestock losses to

predators other than wolves and to natural causes. But wolf losses are not spread evenly among all Montana livestock producers or shared by the industry as a whole. These losses are borne by individual livestock producers and the losses may in fact, be significant in proportion to the size of the operation. Furthermore, these losses represent a new added risk to some individual livestock producers, depending on where they are geographically with respect to wolf pack territories.

Under this alternative, FWP would not actively promote or facilitate creation of an entity to fund and administer a compensation program should the private programs be discontinued. Defenders of Wildlife, another private organization, or even a livestock insurance program may still compensate livestock producers for their losses. Therefore, economic losses to individual producers would only decrease to the extent that FWP's management program decreased the number of depredation incidents or decreased other expenses incurred by changing husbandry practices.

Big Game Hunting. Same as Alternative 2 (Updated Council).

Regional Economic Activity. Same as Alternative 2 (Updated Council).

Outfitting Industry. Same as Alternative 2 (Updated Council).

Recreational Values.

Hunting Values. Same as Alternative 2 (Updated Council).

Wildlife Viewing and Recreational Trip Values. Same as Alternative 2 (Updated Council)

Table 37. Estimated livestock losses (confirmed and probable) and the economic value of livestock and domestic animal losses in the year 2015 for Alternative 3 (Additional Wolf). The columns may not sum, due to rounding.

Type of Loss	Number of Animals Lost		Value per Head[a]	Total Value of Loss	
	Low	High		Low	High
Confirmed Cattle	28	62	$850	$23,800	$52,700
Confirmed Sheep	32	71	$94	$3,008	$6,674
			Confirmed Total Value	$26,808	$59,374
Probable Cattle	17	38	$850	$14,450	$32,300
Probable Sheep	3	6	$94	$282	$564
			Probable Total Value	$14,732	$32,864
			Total cattle and sheep losses	$41,540	$92,238
			Estimated Loss of Other Domestic Animals[b]	$3,377	7,498
			TOTAL ESTIMATED ANNUAL LOSS	$44,917	$99,736

[a] Average value of all sheep and lambs and all cattle, 2001 Montana Agricultural Statistics.
[b] Historically, Defenders of Wildlife compensation payments for other domestic animals (guarding dogs, horses, or llamas) was 8.13% of the total payments for cattle and sheep.

FWP Fiscal Impacts

Fiscal impacts under this alternative are similar to Alternative 2 (Updated Council). FWP anticipates some changes in revenue associated with antlerless elk permits, deer B licenses, and moose permits, but it will be similar to historic fluctuations. Some license revenue could be expected if FWP were to implement regulated harvest for wolves sometime in the future. However, the projected budget is amended to reflect 2 changes (Table 38). The amount for enhanced ungulate monitoring increased from $75,000 to $100,000 per year and no compensation program is shown. The budget also includes as a separate line item the $50,000 to fund extra preventative work by FWP, WS, and others. FWP's predicted budget to implement this alternative is $897,000.

Administration, Funding, and Legal Status

Same as Alternative 2 (Updated Council).

Physical Environment

Same as Alternative 1 (No Action).

Short Term, Long Term, and Cumulative Effects

The environmental consequences of this alternative will be similar to Alternative 2 (Updated Council). Over the longer term, the consequences increase because of higher livestock losses that overall management strategies and approaches to minimize risk may or may not mitigate completely. The absence of a compensation program actively promoted by FWP means that the resultant economic costs of whatever livestock are lost would be borne by the livestock producer.

Mitigation

Mitigation for this alternative is similar to Alternative 2 (Updated Council). Mitigation for the increased economic losses to individual livestock producers would be enhanced by the increased flexibility and innovative approaches to deter livestock depredations.

Irretrievable Commitments

Same as Alternative 2 (Updated Council). In the absence of a compensation program, the economic losses are irretrievable.

Table 38. Implementation budget for Alternative 3 (Additional Wolf). Asterisk denotes a change from the budget for Alternative 2 (Updated Council). Overhead and inflation are not included.

Division / Activity	Estimated Budget
Montana Fish, Wildlife & Parks	
Wildlife Division (Staff 4.30 FTE)	
Biologists (4.0 FTE)	$150,000
Operations	$156,000
Enhanced Ungulate Monitoring*	$100,000*
Wildlife Lab (0.30 FTE)	$ 8,000
Wildlife Lab Operations, Research (contracts, operations, graduate student stipends)	$ 67,000
Total	**$481,000**
Enforcement Division (Staff 2.5 FTE)	
Staff	$ 86,000
Operations	$ 71,000
Total	**$157,000**
Conservation Education Division (Staff 0.75 FTE)	
Information Officer and Headquarters Staff (.75 FTE)	$ 44,000
Operations	$ 10,000
Total	**$ 54,000**
Fiscal, Administration, and Legal (staff 1.0 FTE)	
Fiscal and Administration (0.75)	$ 37,000
Legal (0.25 FTE)	$ 18,000
Total	**$ 55,000**
Proactive, preventative efforts by FWP, Wildlife Services, or other cooperators	**$50,000**
Depredation: Wildlife Services (USDA/APHIS) Cooperative Wolf Damage Management and FWP-directed Predator Control	**$100,000**
FWP ANNUAL TOTAL	**$897,000**

Alternative 4. Minimum Wolf

For comparison, the environmental consequences of this and the other alternatives are presented in a summary at the end of this chapter (Table 43).

Biological Environment

Wolf Management. FWP would implement an aggressive program that manages the gray wolf at the minimum legal requirements. Although many of the management tools would be the same as for Alternatives 2 (Updated Council) and 3 (Additional Wolf), they would not be implemented adaptively. Aggressive WS control actions, coupled with landowner removals would keep the population at the minimum level to avoid relisting. Private landowners would have more responsibility for control work on

their property. Wolves would be harassed more routinely and killed more often than for the other alternatives. Regulated harvest would not be implemented consistently over time because aggressive wolf control by landowners and by WS is expected to keep wolf numbers low. Wolf packs near national parks would be managed more conservatively than other packs in the state, as an added measure of security that some natural dispersal could occur. FWP would apply the more strict federal definition of a breeding pair (federal recovery definition) because the program goal is to maintain the minimum number to prevent relisting. FWP would have less flexibility to adjust management in that every wolf or pack would be an important contribution to the total population because the population would be close to the minimum required.

Gray wolves would be managed as a "species in need of management" which grants full legal protection from indiscriminant killing. However, significant wolf mortality may be necessary through the provision for special kill permits issued to landowners and through WS control actions to maintain wolf numbers near the cap. FWP would issue special kill permits at the level necessary to achieve enough mortality to maintain the population at the capped, minimum level. The species would not be integrated into the wildlife program in the context of modern scientific wildlife management, but would instead be treated separate and distinct.

Wolf Numbers and Distribution. Approximately 154 wolves would be present in Montana in 2015, which could be about 13 breeding pairs according to the federal recovery definition. It is the fewest of any alternative. If the number of wolves were greater at the time of actual delisting, FWP would accelerate control actions by WS or by private landowners and utilize a licensed hunting/trapping program to decrease the population until it was at the minimum. Total wolf numbers could fluctuate because of management actions, changes in prey densities, or intraspecific competition. The future population should be secure, but so close to the margin that it could drop below relisting criteria in the face of unexpected environmental events. If that should occur, FWP would have limited management flexibility and most management/control activities would be non-lethal.

Wolf distribution would be limited to western Montana by control actions. Wolves would be strongly discouraged in central and eastern Montana, on private lands, and on FWP WMAs. In western Montana, wolf distribution may ultimately be limited to federal public lands and national parks.

Wolf Habitat, Connectivity, and Land Management. Connectivity requirements would be met marginally and would have to be maintained by periodically relocating wolves. This tool is expensive, and it has had mixed success in the past. Connectivity of the tri-state population with Canada would occur because of more conservative management in northwest Montana. Public land management activities, whether logging, grazing, or travel management are not affected by this alternative, although managers may adopt policies or make changes for other purposes. Some land managers may adopt localized area closures around den or rendezvous sites, especially within national parks. FWP would not invest much effort in coordinating with land managers or private landowners on wildlife habitat projects that would benefit wolves.

Monitoring. FWP will monitor the population to ensure that it is secure and above the recovery goal. Telemetry would be required to a greater extent under this alternative, and it will increase monitoring costs compared to the other alternatives. Monitoring efforts themselves must be very precise and reliable because it will be important to document every pack and its reproductive status to determine whether it could be tallied as a breeding pair. Wolves would be captured and handled more frequently to maintain telemetry contact with each pack. Significant effort must be committed to achieve the intensity required to document that Montana is meeting the minimum requirements.

Prey Populations. At the regional and statewide scale, prey populations will fluctuate through time due to all causes of mortality and environmental factors similar to the historical patterns described in Chapter 2. At the localized level, wolf predation may still influence prey populations, particularly in combination with environmental factors. Because so few wolves would be on the landscape, fewer localized impacts are expected. Overall, aggressive wolf management philosophies would benefit prey populations across a broader area because wolf predation on prey would be less under this alternative in that fewer wolves would exist on the landscape. Because there would be fewer wolf packs, ungulate monitoring would not be increased.

Other Wildlife. Species such as scavengers that benefit from wolf presence in an ecosystem would not benefit as much from this alternative compared to the others. Those species that may compete with wolves for food or space would be less impacted by this alternative.

Human Environment

Social Factors. Wolf restoration has been a divisive issue among Montanans. Those citizens opposed to wolf presence would benefit the most by this alternative. Citizens who are supportive or neutral may be impacted by the minimal wolf management philosophy. By not taking an adaptive approach, FWP would not meet the differing conservation and management expectations and interests that exist across the spectrum of social values. While Montana citizens would have a stronger voice in wolf management in their state because the program would be administered from a local perspective, FWP would not be able to address all the local interests. In addition, because FWP management flexibility could be constrained by the low wolf numbers, some management decisions may not be entirely satisfactory in light of the need to maintain enough breeding pairs to prevent relisting.

Public Outreach. A significant component of public outreach would consist of working with private landowners to achieve management objectives and to notify them when wolves are in the area. This role would partially be filled by biologists or wardens and partially by information officers distributed around the state. The public outreach to inform landowners and the public about wolf pack activities or whereabouts may increase the public's sense of safety. Significant public outreach may also be required to explain the program and its purposes.

Human Safety. Under this alternative, people would encounter wolves less frequently. There should be fewer encounters between wolves and lion hounds or bird hunting dogs. Other impacts would be the same as Alternative 2 (Updated Council).

Private Property. FWP does not intend to restrict private property uses to manage a recovered wolf population. While wolf use is primarily on public lands, some use of private lands does occur. Use of private lands will increase in the future with increasing wolf numbers, and conflicts may occur more frequently. Any conflicts on private property would be resolved with aggressive management tools, not incrementally through adaptive management as described under Alternative 2 (Updated Council). In the case of livestock, this would be accomplished either by WS or by the landowner through special kill permits. Management tools would be implemented specifically to discourage wolf use of private property. The economic impacts of wolf-livestock conflicts are addressed below.

Economics / Livelihoods

Livestock Depredation. This alternative predicts that there will be about 154 wolves in Montana in 2015. FWP expects that the historic per wolf depredation rate would be reduced by 75% from the estimate used for Alternative 1 (No Action). Approximately six cattle and seven sheep would be lost annually to

confirmed wolf depredation. Four cattle and one sheep could be tallied as probable depredation (Table 39). Losses may be greater in the early years of implementation if more wolves are in the population.

Montana Agricultural Statistics Service (2002) reports that, as of January 1, 2001, the average value of all cattle in Montana was $850 per head. Sheep averaged $94 per head. Purebred lines may, in fact, have a significantly higher value, while other animals may be a lower than average value. The predicted economic loss is $5,758 for confirmed depredation, $3,494 for probable depredation, and $752 for other domestic animals (Table 39). Livestock producers may incur other expenses, including increased management costs due to changes in husbandry practices or materials to improve the physical security of animals. These costs are difficult to estimate and have not been quantified. Presumably, livestock producers already incur some management costs to mitigate for predator losses.

The estimated annual livestock depredation losses for this alternative are small compared to either the statewide value of annual cattle and sheep production or to the level of annual livestock losses to predators other than wolves and to natural causes. But wolf losses are not spread evenly among all Montana livestock producers or shared by the industry as a whole. These losses are borne by individual livestock producers and the losses may in fact, be significant in proportion to the size of the operation. Furthermore, these losses represent a new added risk to some individual livestock producers, depending on where they are geographically located with respect to wolf pack territories.

This alternative does not include a compensation program because landowners and livestock producers are able to aggressively manage situations on their private properties through special kill permits provided by FWP. On public lands, livestock producers could kill a wolf it is attacking, killing, or threatening their livestock. Aggressive management tools should limit livestock depredation to the lowest levels of any alternative. In another sense, this alternative places the highest management burden on private property owners and livestock producers to carry out a significant amount of control work–which is a different type of cost to them.

Big Game Hunting. Same as Alternative 2 (Updated Council).

Regional Economic Activity. Same as Alternative 2 (Updated Council).

Outfitting Industry. Same as Alternative 2 (Updated Council).

Recreational Values.

Hunting Values. Same as Alternative 2 (Updated Council)

Wildlife Viewing and Recreational Trip Values. FWP expects wolf-viewing opportunities to have a positive impact on recreational values in Montana. But at this point, the impact can't be quantified due to a lack of data. For example, it's unknown how changes in the number of wolves affects the odds of seeing wolves or how increasing or decreasing viewing opportunities affect expenditures or net benefits. The addition of wolf viewing should positively impact the recreational values of many citizens and visitors to Montana. The size of the wolf population should be directly related to the positive value accruing to the individuals who value and would seek out wolf viewing or hearing opportunities. As the alternative specifying the lowest recovered population, it would also likely have the least potential to positively impact recreational values of the five alternatives examined.

FWP Fiscal Impacts

Fiscal impacts describe the changes in revenue from license sales, the cost of implementing the program, and the potential sources of revenue to fund it. License revenue from antlerless elk permits, deer B licenses, and moose permits would vary by $220,313 annually, the same as for the other alternatives. FWP's projected budget to implement this alternative is $952,000. FWP would implement this alternative through special federal appropriations, which would be the sole funding source.

Table 40 represents a budget to implement this alternative. It illustrates increased costs to FWP for an intensive wolf monitoring program, the higher administrative costs for increased coordination with adjacent states and USFWS, and increased costs to administer the special kill permit system, and landowner contact. Ungulate monitoring would not be enhanced because so few wolves would be present. WS funding would decrease because private landowners would carry more responsibility. There would be no compensation program. While this budget is FWP's best projection of the resources required, FWP cannot assess its accuracy until the agency actually assumes management authority and implements this alternative. Some components may not be captured fully by this budget. There may also be costs that could not be predicted at this time or were unforeseen.

Table 39. Estimated livestock losses (confirmed and probable) and the economic value of livestock and domestic animal losses in the year 2015 for Alternative 4 (Minimum Wolf). The number of animals is rounded to the nearest whole number.

Type of Loss	Number of Animals Lost	Value per Head[a]	Total Value of Loss
Confirmed Cattle	6	$850	$5,100
Confirmed Sheep	7	$94	$658
		Confirmed Total Value	$5,758
Probable Cattle	4	$850	$3,400
Probable Sheep	1	$94	$94
		Probable Total Value	$3,494
		Total cattle and sheep losses	$9,252
		Estimated Loss of Other Domestic Animals[b]	$752
		TOTAL ESTIMATED ANNUAL LOSS	$10,004

[a] Average value of all sheep and lambs and all cattle, 2001 Montana Agricultural Statistics.
[b] Historically, Defenders of Wildlife compensation payments for other domestic animals (guarding dogs, horses, or llamas) was 8.13% of the total payments for cattle and sheep.

Administration, Funding, and Legal Status

Under this alternative, FWP would be the lead agency, and WS would still be an important cooperator. A great deal of coordination would be required between FWP and WS, Idaho, Wyoming, tribal authorities, NPS, and USFWS. Private landowners would be administering a significant aspect of the program in that their actions will help manage wolf numbers and distribution. This would require greater effort on their part. Individual landowners would make more decisions on how management is implemented in local situations. To that end, landowners' discretionary decisions would significantly influence outcomes. For

FWP and WS, many new wolf management activities fall within existing duties and responsibilities already carried out. However, some activities would clearly add to existing responsibilities and workloads. Existing resources would not be adequate.

State laws and FWP administrative rules would guide management and establish the legal framework. The gray wolf would be removed from the state's endangered species list and reclassified as a "species in need of management." Management regulations would be drafted to reflect the aggressive management philosophies described. Even though the gray wolf would be legally protected from an "open season", wolves would be treated differently from how other large carnivores are managed in that the inherent value is not recognized.

Physical Environment

Same as Alternative 1 (No Action).

Short Term, Long Term, and Cumulative Effects

FWP will implement the program, in conjunction with WS, but will be closely supervised by USFWS. Overall, agency flexibility to respond to anticipated and unanticipated situations would be constrained to a large degree because every wolf and pack is a valuable contribution to the Montana population. FWP and WS would also be closely scrutinized by Idaho and Wyoming authorities to ensure that a drop in Montana wolf numbers would not jeopardize the tri-state population.

Wolf numbers will probably increase and so will wolf distribution in the first few years, until control activities bring numbers back down to the delisting level. Localized impacts to prey populations, individual outfitters, or individual businesses may also develop in the short term but are expected to diminish with time. Hunter opportunity will continue to fluctuate. Livestock losses to wolves will still be documented and affect individual producers, but those impacts will be minimal. Landowners and livestock producers would be more closely scrutinized because their participation is a significant part of the program. Licensed hunters and trappers would not be able to regularly participate in wolf conservation and management in Montana.

In the long run, it may not actually be possible to effectively cap wolf numbers and limit wolf distribution. A significant amount of mortality may be required and that level may not be completely achievable or socially acceptable. On the other hand, Montana's portion of the tri-state population could drop below the minimum level, thereby risking the possibility that the species would be listed again and once again managed by USFWS in Montana. In the absence of a proactive program that responds to people and wolves, management efforts may not be efficiently focused or effective. Because the program would be funded strictly by federal money, it may be held to a higher standard and more stringent accountability during USFWS oversight of FWP's federal aid program. All of FWP's matching federal funds could be jeopardized if those standards were not met.

In a cumulative sense, wolf conservation and management in Montana will become increasing controversial because, given the lack of an adaptive approach, not all interests and needs would met in a balanced, responsive way. By managing wolves as close to a legally-defined predator as possible, FWP would ignore a segment of the public that is either supportive or neutral towards wolf presence in Montana and the idea that the gray wolf could be integrated in a modern wildlife program and managed similar to black bears or mountain lions.

Table 40. Implementation budget for Alternative 4 (Minimum Wolf). Asterisk denotes a change from the budget for Alternative 2 (Updated Council). Overhead and inflation are not included.

Division / Activity	Estimated Budget
Montana Fish, Wildlife & Parks	
Wildlife Division (Staff 5.30 FTE)	
Biologists (5.0 FTE)*	$187,000*
Operations*	$225,000*
Enhanced Ungulate Monitoring*	-0-*
Wildlife Lab (0.30 FTE)	$ 8,000
Wildlife Lab Operations, Research (contracts, operations, graduate student stipends)	$ 67,000
Total	**$487,000**
Enforcement Division (Staff 3.5 FTE)	
Staff (3.5 FTE)*	$ 121,000*
Operations*	$ 91,000*
Total	**$212,000**
Conservation Education Division (Staff 1.25 FTE)*	
Information Officer and Headquarters Staff (1.25 FTE)	$ 60,000*
Operations*	$ 25,000*
Total	**$ 85,000**
Fiscal, Administration, and Legal (staff 1.5 FTE)*	
Fiscal and Administration (1.25)*	$ 75,000*
Legal (0.25 FTE)	$ 18,000
Total	**$ 93,000**
Depredation: Wildlife Services (USDA/APHIS) Cooperative Wolf Damage Management and FWP-directed Predator Control*	**$75,000***
FWP ANNUAL TOTAL	**$952,000**

Mitigation

One of the most significant impacts of this alternative is the risk that the wolf population in Montana would decline to the extent that the tri-state population is in jeopardy and would require renewed protection under ESA. Relisting the northern Rockies population prior to that happening could mitigate the risk so that wolves would be fully protected by federal law, which is more restrictive than the proposed state management program and Montana law. USFWS may consult with FWP to adjust the program before relisting becomes necessary. Reintroducing wolves from Canada or other adjacent states could augment the Montana population. FWP could also mitigate that impact by modifying specific aspects of how this alternative is implemented. FWP could manage more conservatively or issue fewer permits to private landowners. These same measures would also mitigate for the constraints this alternative places on FWP.

Irretrievable Commitments

In the future, wolves will be present in Montana. FWP would make the commitment to maintain the population. That commitment would be irretrievable in the sense that FWP does not intend to default on its legal responsibilities to maintain a viable, but small population. By assuming the lead role for wolf management, FWP would be committing staff and financial resources to fulfill the needs of the program. Those resources would be partially unavailable to other program areas to the extent that responsibilities don't overlap. Some wolves will still kill livestock. Even though wolves are not expected to have a measurable effect on the livestock industry, a few producers could sustain substantial losses in a given year. The number of depredations will be small, but irretrievable nonetheless.

Alternative 5. Contingency

The environmental consequences of this alternative were originally predicted for the Draft EIS prior to USFWS finalizing the reclassification rule that downlisted wolves in northwestern Montana from endangered to threatened status. In it's final rule notification, USFWS concluded that the new threatened status and the increased agency flexibility will not cause any significant increase in wolf mortality that would impact population levels or prevent population increases (USFWS 2003a). It follows by extension that the wolf population in northwest Montana would also not be expected to increase any faster than historical rates due to increased management flexibility. Therefore, FWP did not reanalyze the environmental consequences of this alternative for the Final EIS. USFWS and FWP agree that no significant changes in population performance are expected under the new rules that would warrant a new impacts analysis. The environmental consequences of this alternative were predicted as if the current and newly revised federal management policies and regulations were carried forward from 2003 to 2015. For comparison, the environmental consequences of this and the other alternatives are presented in a summary at the end of this chapter (Table 43).

Biological Environment

Wolf Management. The consequences would be similar to Alternative 2 (Updated Council). FWP would implement an adaptive program with a 15-breeding pair trigger to move from conservative to liberal tools and vice versa. FWP would have the flexibility to implement most provisions outlined in Alternative 2, but all FWP management options and decisions would be guided by federal regulations until the gray wolf was fully delisted in the northern Rockies. If the wolf population increases at the low rate of growth, liberal management tools would be available in 2006. If the population grew at the higher rate, liberal tools would be available starting in 2004.

The proactive provisions of this alternative would be emphasized to a much greater degree than under Alternative 1 (No Action, USFWS authority). FWP would have more personnel resources from which to draw because personnel are distributed more widely than USFWS personnel. Furthermore, because federal rules are more restrictive about the conditions under which wolves could be harassed or killed, proactive strategies become increasingly more important. Emphasizing proactive strategies earlier on may dampen or avoid future conflicts. Wolves could still be harassed or killed in certain circumstances. Special kill permits will be available to landowners, but the permits would be provisioned according to federal rules. Nonetheless, fewer wolves would probably be harassed or killed under this alternative than for Alternative 2 (Updated Council) because certain provisions of state law allowing defense of property

would not be allowed. Defense of property would be guided by federal laws. Also, regulated harvest through hunting and trapping would also be precluded by federal rules.
Numbers and Distribution. Between 421 and 1,167 (or 35-95 breeding pairs according to the federal definition) could be present in Montana in 2015 under this alternative. FWP expects the population to be closer to the low end of the range, which is fewer than for Alternative 1 (No Action), but more than Alternatives 2, 3 and 4. This result could be expected since not all liberal management tools would be available to FWP until delisting is fully complete. It is possible that there would be fewer wolves if the population grows more slowly than predicted. The population could be higher if the management tools that FWP could implement didn't slow population growth to the extent assumed for this EIS. This population would be secure and still provide the maximum management flexibility allowed under federal regulations. FWP would not expect the population to drop unexpectedly close to the relisting level, but it will fluctuate through time.

Wolf distribution would be the same as for Alternative 2 (Updated Council).

Wolf Habitat, Connectivity, and Land Management. Same as Alternative 2 (Updated Council).

Monitoring. Same as Alternative 2(Updated Council).

Prey Populations. Same as Alternative 2 (Updated Council). However, in circumstances where reliable data indicate that wolves are disproportionately affecting a local prey population, FWP would not be able to adjust the wolf-prey balance using regulated wolf harvest. Instead, FWP could only use wolf relocation techniques and adjust human hunter opportunity for ungulates to address the situation.

Other Wildlife. Same as Alternative 2 (Updated Council).

Human Environment

Social Factors. In most respects, the consequences of this alternative would be similar to Alternative 2 (Updated Council). One important difference is that the gray wolf would still be listed under ESA. FWP can still implement an adaptive program and respond to the needs of people and wolves in most ways desired. However, FWP could not implement all the management tools that are included in Alternative 2 (Updated Council).

This alternative could be a reasonable interim step in the event that wolf delisting is delayed for an extended period of time. It provides a mechanism for FWP to carry out day to day wolf management. Because it is adaptive, it would allow FWP to meet the differing management expectations and needs that exist across the spectrum of social values. For some citizens, FWP may fulfill these needs and expectations more effectively. Other citizens may not agree, believing that federal authorities alone should manage species listed under ESA. Still others may believe the federal government should manage wolves in perpetuity. This alternative would call on the public to accept the legitimacy of FWP to manage gray wolves while the species is still officially listed under ESA.

Public Outreach. Same as Alternative 2 (Updated Council). Some additional effort would be required initially to inform the public about the rules and regulations, as FWP would be assuming management authority of a listed species from USFWS.

Human Safety. Same as Alternative 1 (No Action). FWP would implement the federal regulations pertaining to defense of human life. Under federal regulations, wolves could be harassed or killed in defense of human life in the presence of an immediate and direct threat. Federal regulations would also

permit harassment or lethal control of a wolf if it is a demonstrable, but not immediate threat to human life or safety. There is a 24-hour reporting requirement.
Private Property. Same as Alternative 2 (Updated Council).

Economics / Livelihoods

Livestock Depredation. This alternative predicts that there will be about 421-1,167 wolves in Montana in 2015. FWP expects that a greater emphasis on proactive strategies would reduce the historic depredation rate by 25%, although this is a smaller percentage than Alternative 2 (Updated council) because not all liberal tools would be available. Approximately 49-135 cattle and 55-153 sheep would be lost to confirmed depredation (Table 41). About 29-81 cattle and 5-13 sheep could be lost to probable depredation. The predicted economic loss for confirmed depredation is $46,820 - $129,132. Economic loss due to probable depredation is $25,120 – $70,072. Economic losses for other domestic animals could be $5,849 - $16,195 (Table 41).

Livestock producers may incur other costs, including increased management costs due to changes in husbandry practices or materials to improve the physical security of animals. These costs are difficult to estimate and have not been quantified. Presumably livestock producers already incur some management costs to mitigate for predator loss.

The estimated annual livestock depredation losses for this alternative are small compared to either the statewide value of annual cattle and sheep production or to the level of annual livestock losses to predators other than wolves and to natural causes. But wolf losses are not spread evenly among all Montana livestock producers or shared by the industry as a whole. These losses are borne by individual livestock producers and the losses may in fact, be significant in proportion to the size of the operation. Furthermore, these losses represent a new added risk to some individual livestock producers, depending on where they are geographically in relation to wolf pack territories. Under this alternative, livestock producers have some assurance that Defenders of Wildlife would still provide compensation because the gray wolf would still be listed. However, because the Defenders of Wildlife program is voluntary and funded by private donation, it could be discontinued at any time. FWP would not seek out or develop a substitute, so these losses could go uncompensated if Defenders of Wildlife no longer paid compensation.

Big Game Hunting. Same as Alternative 2 (Updated Council).

Regional Economic Activity. Same as Alternative 2 (Updated Council).

Outfitting Industry. Same as Alternative 2 (Updated Council).

Recreational Values.

Hunting Values. Same as Alternative 1 (No Action), but localized impacts expected to be less.

Wildlife Viewing and Recreational Trip Values. Same as Alternative 2 (Updated Council).

FWP Fiscal Impacts

Fiscal impacts describe the changes in revenue from license sales, the cost of implementing the program, and the potential sources of revenue to fund it. License revenue from antlerless elk permits, deer B

licenses, and moose permits could be expected to vary by $220,313 annually, the same as for all alternatives. FWP's projected budget to implement this alternative is $924,739 – $1,062,399. An additional amount is shown for compensation, but that would be provided independently. FWP would implement this alternative through a combination of federal, private, and state funding. Ninety percent of the total budget would be covered by federal sources. No new FWP revenue would be derived from a regulated wolf harvest.

Table 42 presents a budget for this alternative. FWP anticipates slightly increased administrative costs because of increased coordination with USFWS (not shown) and enhanced ungulate monitoring compared to Alternative 2 (Updated Council). In addition, FWP would dedicate an extra $50,000 to increase technical assistance to landowners for proactive work. Because wolves would still be listed, FWP assumes that WS will continue to be funded directly by Congressional appropriation or through USFWS. While it is FWP's best projection of the resources required, FWP cannot assess its accuracy until the agency actually assumes management authority and begins implementation

Table 41. Estimated livestock losses (confirmed and probable) and the economic value of livestock and domestic animal losses in the year 2015 for Alternative 5 (Contingency). The columns may not sum, due to rounding.

Type of Loss	Number of Animals Lost		Value per Head[a]	Total Value of Loss	
	Low	High		Low	High
Confirmed Cattle	49	135	$850	$41,650	$114,750
Confirmed Sheep	55	153	$94	$5,170	$14,382
			Confirmed Total Value	$46,820	$129,132
Probable Cattle	29	81	$850	$24,650	$68,850
Probable Sheep	5	13	$94	$470	$1,222
			Probable Total Value	$25,120	$70,072
			Total cattle and sheep losses	$71,940	$199,204
			Estimated Loss of Other Domestic Animals[b]	$5,849	$16,195
			TOTAL ESTIMATED ANNUAL LOSS	$77,789	$215,399

[a] Average value of all sheep and lambs and all cattle, 2001 Montana Agricultural Statistics.
[b] Historically, Defenders of Wildlife compensation payments for other domestic animals (guarding dogs, horses, or llamas) was 8.13% of the total payments for cattle and sheep.

Administration, Funding, and Legal Status

Under this alternative, administrative impacts are similar to Alternative 2 (Updated Council). An important exception is that even though FWP would be the lead agency for day to day management functions and is the primary decision maker, USFWS would oversee the state's implementation. Some elements of the program would be implemented using federal regulations, while others would be implemented using state regulations. That poses some challenges both for FWP, WS, and the public to fully understand all the details. USFWS would still fulfill Section 7 consultations, not FWP.

Many new wolf management activities fall within existing duties and responsibilities already carried out by FWP or WS. But, some activities would clearly add to existing responsibilities and work loads (see Alternative 2). FWP would still dedicate some staff time to coordinate with USFWS, Idaho, and Wyoming to delist the gray wolf in the northern Rockies. In addition, there remains some risk to FWP that federal funds may be difficult to maintain over the long term. FWP may have to decide whether to continue state involvement sometime in the future if state and private sources cannot make up the difference.

Table 42. Implementation budget for Alternative 5 (Contingency). Asterisk denotes a change from the budget for Alternative 2 (Updated Council). Overhead and inflation are not included.

Division / Activity	Estimated Budget
Montana Fish, Wildlife & Parks	
Wildlife Division (Staff 4.30 FTE)	
Biologists (4.0 FTE)	$150,000
Operations	$156,000
Enhanced Ungulate Monitoring*	$100,000*
Wildlife Lab (0.30 FTE)	$ 8,000
Wildlife Lab Operations, Research (contracts, operations, graduate student stipends)	$ 67,000
Total	**$481,000**
Enforcement Division (Staff 2.5 FTE)	
Staff	$ 86,000
Operations	$ 71,000
Total	**$157,000**
Conservation Education Division (Staff 0.75 FTE)	
Information Officer and Headquarters Staff (.75 FTE)	$ 44,000
Operations	$ 10,000
Total	**$ 54,000**
Fiscal, Administration, and Legal (staff 1.0 FTE)	
Fiscal and Administration (0.75)	$ 37,000
Legal (0.25 FTE)	$ 18,000
Total	**$ 55,000**
Proactive, preventative efforts by FWP, Wildlife Services, or other cooperators	**$50,000**
FWP ANNUAL TOTAL	**$797,000**
Depredation: Wildlife Services (USDA/APHIS) Cooperative Wolf Damage Management and FWP-directed Predator Control; source is separate federal appropriation*	**$50,000***
Compensation (money from private source or federal appropriation)	**$ 77,739 – $215,399**
PROGRAM TOTAL (Including Compensation)	**$924,739 – 1,062,399**

Physical Environment

Same as Alternative 1 (No Action).

Short Term, Long Term, and Cumulative Effects

In the short term, this alternative could serve as a bridge between federal and state authority. Despite USFWS oversight, FWP would be implementing the program and state personnel would gain knowledge and experience prior to assuming full responsibility. There could be some confusion in the public's understanding of the roles and responsibilities of the state and federal agencies because the state would be assuming management of a listed species. While there are some limitations to what FWP could do, FWP would still have latitude to implement much of the program, especially the proactive elements. In so doing, the program is more responsive both in the short and long term. Wolf numbers will probably increase and so will wolf distribution. Localized impacts to prey populations, individual outfitters, or individual businesses may also develop in the short term. Hunter opportunity will still continue to fluctuate for a variety of reasons, which may include wolf predation. Livestock losses will still affect individual producers.

In a cumulative sense, FWP would be stepping into a controversial arena. For some citizens, wolf acceptance would be improved because management would be through a state agency, adaptive principles would make for a more flexible program than currently exists, and the program would balance the needs of people and wolves. For other citizens, wolf acceptance may even decrease because the state would manage a listed species that had achieved the biological recovery requirements but was still listed under ESA. Public debate surrounding wolf conservation will probably remain conflicted because the national scope will be maintained because the species would still be listed.

Mitigation

Mitigation measures for this alternative are similar to Alternative 2 (Updated Council). An increased public outreach effort can mitigate public confusion over agency roles and responsibilities, the management framework, and uncertainty about the laws and regulations.

Irretrievable Commitments

Wolves will be present in Montana. Under this alternative, FWP would make a commitment to conserve and manage the species and integrate it within the wildlife program. In the short term, that integration may not be complete since federal regulations guide some elements of the program. However, in the long term once the wolf is delisted, FWP's commitment would be irretrievable in the sense that FWP does not intend to default on its legal responsibilities to maintain a secure viable population in the future. FWP would be committing staff and financial resources to fulfill the needs of the program. Those resources would be partially unavailable to other program areas to the extent that responsibilities and activities don't overlap. FWP would be taking the risk that federal funding would be secure, adequate, and would not diminish prior to full delisting. FWP would also make the commitment to conserve and manage the gray wolf, no matter the outcome of the delisting process – whether delays are short term or long term.

The adaptive management tools within this alternative will mitigate many potentially irretrievable commitments of resources or changes in resource status. However, some wolves will kill livestock and those losses are irretrievable.

Table 43. Summary of environmental consequences for each alternative.

Issue	1. No Action	2. Updated Council	3. Additional Wolf	4. Minimum Wolf	5. Contingency
Wolf Management	Recovery emphasis; increase population size and distribution; address conflicts	Adaptive; responsive; balanced; FWP has flexibility; gray wolf integrated into wildlife program; resolve conflicts	Same as Alternative 2; more management flexibility because more wolves	Not adaptive; aggressive; liberal; more control done by landowners; FWP has limited flexibility	Same as Alternative 2 but not all tools available while gray wolf still listed (no regulated harvest)
Number of Wolves in 2015	854 wolves or 70 breeding pairs	LOW: 328 wolves or 27 breeding pairs; liberal tools start in 2006 HIGH: 657 wolves or 54 breeding pairs; liberal tools start in 2004	LOW: 365 or 30 breeding pairs; liberal tools start in 2008 HIGH: 807 or 66 breeding pairs; liberal tools start in 2006	CAP: 154 or 13 breeding pairs; aggressive management upon delisting until population reduced to cap	LOW: 421 or 35 breeding pairs; liberal tools start in 2006; no regulated harvest HIGH: 1,167 or 95 breeding pairs; liberal tools start in 2004; no regulated harvest
Wolf Distribution in 2015	Statewide is possible, but will ultimately be determined by prey abundance and conflicts with people in practical terms; expected to be western, west-central, and southwestern Montana	Statewide is possible, but will probably be primarily western, west central and southwestern Montana; no administrative zone, but encouraged on remote public lands and integrated in mixed landowner-ships; localized distribution will be determined by prey abundance and conflicts with people	Same as Alternative 2	Public lands in western Montana; administrative zone defined by FWP regional boundaries; no wolves east of FWP Region's 4 and 5 boundaries; management to restrict wolf use of private lands; localized distribution will be determined by prey abundance and conflicts	Same as Alternative 2
Wolf Habitat, Connectivity, Land Management	Connectivity assured through legal protection and adequate prey and wolf numbers	Connectivity assured through legal protection and adequate prey and wolf numbers	Connectivity slightly increased over Alternative 2	Connectivity not assured without periodic wolf trap/relocation efforts	Same as Alternative 2
Monitoring	Moderate, declining intensity; done by USFWS	Moderate cost and intensity; done by FWP	Same as Alternative 2	High cost and intensity; done by FWP; strong reliance on telemetry	Same as Alternative 2

Table 43. Continued.

Issue	1. No Action	2. Updated Council	3. Additional Wolf	4. Minimum Wolf	5. Contingency
Prey Populations	Management not fully integrated with wolves; numbers fluctuate through time because of predation (all species), natural mortality, human hunting, habitat conditions, weather events; fluctuation similar to historical patterns; local ungulate populations may decrease in presence of wolves; local populations may take longer to recover from environmental events in the presence of wolves	Management integrated with wolves and managed ecologically; local populations may decrease in presence of wolves or take longer to recover from environmental events; local impacts expected to be less than Alternative 1; impacts across broad geographic areas not expected; numbers will fluctuate through time due to predation (all causes), natural mortality, human hunting, habitat conditions, weather events; fluctuation similar to historical patterns	Same as Alternative 2	Same as Alternative 2, but no impacts to localized ungulate populations expected	Same as Alternative 2; no regulated wolf harvest to help balance wolf-prey relationships; wolf management tools primarily relocation
Other Wildlife	Some species may be impacted; other species benefit	Same as Alternative 1; FWP better able to address needs of other wildlife species	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
Social	Variable	Variable	Variable	Variable	Variable
Public Outreach	Less effort than Alternatives 2, 3 and 5	Increased from Alternative 1; statewide effort (general ecology, safety, landowner contacts, etc.); many types	Same as Alternative 2	Emphasizes landowner contacts	Same as Alternative 2
Human Safety	Defense of human life under ESA acceptable; report within 24 hours; USFWS management to remove threats to public safety	Defense of human life acceptable under Montana law; FWP management to remove threats to public safety	Same as Alternative 2	Same as Alternative 2	Same as Alternative 1; FWP implements federal regulations
Private Property	No restrictions by USFWS	No restrictions by State of Montana	Same as Alternative 2	Wolf use discouraged; same as Alternative 2	Same as Alternative 2
Livestock Depredation	Confirmed Cattle: 132 Confirmed Sheep: 150 Probable Cattle: 79 Probable Sheep: 13	Confirmed Cattle: 25-51 Confirmed Sheep: 29-58 Probable Cattle: 16-31 Probable Sheep: 3-5	Confirmed Cattle: 28-62 Confirmed Sheep: 32-71 Probable Cattle: 17-38 Probable Sheep: 3-6	Confirmed Cattle: 6 Confirmed Sheep: 7 Probable Cattle: 4 Probable Sheep: 1	Confirmed Cattle: 49-135 Confirmed Sheep: 55-153 Probable Cattle: 29-81 Probable Sheep: 5-13

Table 43. Continued.

Issue	1. No Action	2. Updated Council	3. Additional Wolf	4. Minimum Wolf	5. Contingency
Compensation	Privately funded, voluntary; Defenders of Wildlife possible Confirmed: $126,300 Probable: $68,372 Other Domestic: $15,827	State of Montana with FWP in leadership role establishes an independent entity; no state or matching dollars are used; mitigation through management possible Confirmed: $23,976-$48,802 Probable: $13,882-$26,820 Other Domestic: $3,077-$6,148	No effort by FWP to establish program; private and voluntary OK; no state or matching federal dollars; mitigation possible Confirmed: $26,808-$59,374 Probable: $14,732-$32,864 Other Domestic: $3,377-$7,498	None Confirmed: $5,758 Probable: $3,494 Other Domestic: $752	Same as Alternative 2 Confirmed: $48,820-$129,132 Probable: $25,120-$70,072 Other Domestic: $5,849-$16,195
Big Game Hunting	No impact for non-residents; resident opportunity variable through time; changes not expected to be greater than observed historically; impacts localized; decreases or increases possible due to wolf presence or other management objectives; no mitigation	No impact to non-residents; resident opportunity variable through time; changes not expected to be greater than observed historically; impacts localized, but less severe than Alternative 1 because ungulate management is integrated with wolf management; increases possible due to wolf presence or other management objectives; mitigation possible	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
Regional Economy	No regional or statewide impact; localized possible	Same as Alternative 1; localized changes expected to be less than Alternative 1	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
Outfitting Industry	No impact statewide or regionally; impacts to certain outfitters possible where wolves affect local prey populations; no mitigation	Same as Alternative 1; localized impacts expected to be less than Alternative1	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
Recreational Values (Hunting and Wildlife Viewing)	Variable	Variable	Variable	Variable	Variable

Table 43. Continued.

Issue	1. No Action	2. Updated Council	3. Additional Wolf	4. Minimum Wolf	5. Contingency
FWP Fiscal	Minor impact due to historic changes in license revenue FWP: up to $5,000 for coordination; costs absorbed in existing budget USFWS $1,111,000 -- total for Montana, Idaho, and Wyoming combined WS: all federal appropriation	Minor impact due to historic changes in license revenue; funding shared by federal, state, and private sources; some revenue generated if implement regulated wolf harvest FWP: $913,000-$954,000; combination of FWP, federal, and private; extra $50,000 for preventative work, $100,000 for WS, and compensation included; overhead and inflation not included	Same as Alternative 2 FWP: $897,000; combination of FWP, federal, private; extra $50,000 for preventative work included; $100,000 for WS included; compensation not included	Same as Alternative 1; funding by federal sources; inconsistent revenue from wolf license sales FWP: $952,000 all federal; no extra $$ for preventative work; $75,000 for WS included; no compensation included	Minor impact due to historic changes in license revenue; 90% funding federal; state share out of existing budget; no new revenue generated by wolf license sales FWP: $924,739 – $1,062,399; cost share 90% federal: 10% state until wolf delisted and authority transferred completely; upon delisting, combination of FWP, federal, and private; extra $50,000 for preventative work included; $50,000 for WS shown in budget, but is separate federal appropriation; compensation included
Administration, Funding, and Legal Status	Still listed as "threatened" and "experimental / non-essential"; USFWS and partners; federal laws	Delisted; state laws; "species in need of management"; FWP and WS;	Same as Alternative 2	Delisted; state laws; "species in need of management" but managed aggressively as if it was a "predator"; FWP and WS	Still listed; "threatened" and "experimental / non-essential"; state laws for most things but federal regulations for activities resulting in wolf harassment, injury or death; FWP and WS with USFWS oversight
Physical Environment	No Impact	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1

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GLOSSARY OF TERMS AND ABBREVIATIONS

adaptive management: a model for wolf conservation and management in which the number of wolf packs determines the appropriate management strategies; changes in the number of packs determined through a monitoring program directs selection of more conservative or liberal management strategies; model incorporates resource objectives, monitoring protocols, evaluation of predicted outcomes, and a decision process

aggression: dominance behavior typical of canid species demonstrated towards humans

BLM: U.S. Bureau of Land Management

breeding pair: at least two adult wolves with at least two pups that survive to December 31; the number of breeding pairs are tabulated and used to measure progress towards the USFWS recovery goal for the gray wolf in the northern Rockies

CITES: Convention on International Trade in Endangered Species

compensation: monetary payment to offset or replace the economic loss for a death or injury to livestock or guarding animals due to wolf activity; may also entail financial assistance to livestock producers to offset costs associated with modification to husbandry practices to minimize the potential for wolf-livestock conflicts

confirmed depredation: incident where Wildlife Services conducts a field investigation of dead or injured livestock, at the request of the producer; depredation is *confirmed* in cases where there is reasonable physical evidence that an animal was actually attacked and/or killed by a wolf. The primary confirmation would ordinarily be the presence of bite marks and associated subcutaneous hemorrhaging and tissue damage, indicating that the attack occurred while the victim was alive, as opposed to simply feeding on an already dead animal. Spacing between canine tooth punctures, feeding pattern on the carcass, fresh tracks, scat, hairs rubbed off on fences or brush, and/or eye witness accounts of the attack may help identify the specific species or individual responsible for the depredation. Predation might also be confirmed in the absence of bite marks and associated hemorrhaging (i.e. if much of the carcass has already been consumed by the predator or scavengers) **if** there is other physical evidence to confirm predation on the live animal. This might include blood spilled or sprayed at a nearby attack site or other evidence of an attack or struggle. There may also be nearby remains of other victims for which there is still sufficient evidence to confirm predation, allowing reasonable inference of confirmed predation on the animal that has been largely consumed

Council: Montana Wolf Management Advisory Council

defense of life/property: release from criminal liability for killing or injuring a wolf if the wolf is attacking, killing, or threatening to kill a person, livestock, or a domestic dog (MCA 87-3-130)

delisting: removal of the gray wolf from the list of "threatened or endangered" species that are managed by the U.S. Fish and Wildlife Service under the Endangered Species Act; delisting requires evaluation of current status of species compared to the delisting criteria with regard to habitat, over utilization, disease/predation, existing regulatory mechanisms, and other factors affecting the continued existence of the species; if the current status is secure in each of the 5 categories and the recovery criteria are met, a species is delisted and managed by the state or tribal fish and wildlife management authority

depredation: incident where livestock or guarding animals are injured or killed

draft EIS: draft environmental impact statement identifying alternatives and environmental consequences

final EIS: final environmental impact statement; must include a summary of the major conclusions and supporting information from the draft environmental impact statement and the agency's responses to substantive comments received on the draft

EIS: environmental impact statement

ESA: Endangered Species Act

FWP: Montana Fish, Wildlife & Parks

GNP: Glacier National Park

GYA: Greater Yellowstone Area

habituation: readily visible in close proximity to people or structures on a regular basis; not threatened by close proximity and may even be attracted to human presence or human food sources; extremely rare behavior in wild wolves, but typical behavior for released captive wolf or wolf-dog hybrid; for wolves, may or may not involve food conditioning

illegal mortality: wolf mortality outside the provisions of a special kill permit, defense of life or property, agency management actions, a MFWP Commission approved season, or outside other regulations established for the gray wolf as a legally classified "species in need of management"

guarding animals: domestic animals (dogs, llamas etc.) that escort livestock to decrease likelihood of a depredation incident by aggressively defending livestock in the presence of wolves or other predators

legal mortality: lethal control or mortality of a wolf within the provisions of a special kill permit, defense of life or property, agency management actions, a MFWP Commission-approved season, or the regulations established for the gray wolf as a legally classified "species in need of management"

lethal control: management actions that result in the death of a wolf

livestock: cattle, calf, hog, pig, horse, mule, sheep, lamb, goat, guarding animals, emu, ostrich, poultry

management setting: the combination of landownership patterns, land use, social factors, biological constraints, and physical attributes of the environment that describe a particular area or management situation

management: the collection and application of biological information for the purposes of increasing the number of individuals within species and populations of wildlife, up to the optimum carrying capacity of their habitat, and maintaining such levels. The term includes the entire range of activities that constitute a modern scientific resource program including but not limited to research, census, law enforcement, habitat improvement, and education. Also included within the term, when and where appropriate, is the periodic or total protection of species or populations as well as regulated taking (MCA 87-5-102)

MCA: Montana Codes Annotated

MDOL: Montana Department of Livestock

mixed landownership: patterns of land ownership where privately owned lands are intermingled with public lands and/or corporate-owned lands; sometimes called a "checkerboard pattern"

MEPA: Montana Environmental Policy Act

MOU: Memorandum of Understanding

NPS: U.S. National Park Service

non-lethal control: a variety of management activities intended to avert or resolve a conflict situation without killing the wolf or wolves in question; examples include non lethal harassment to disrupt or interrupt wolf behaviors, frightening a wolf, monitoring of wolf location using radio telemetry, or relocation

non-lethal harassment: an example of non-lethal control where a wolf is frightened or threatened, but is not mortally wounded or killed; purpose is to discourage wolf activity
near people or livestock; examples yelling, radio-activated noise-makers, or firearms which discharge cracker shells

pack: used generically to mean a group of wolves holding a territory and capable of reproduction; more specific definitions are social group and breeding pair

probable depredation: incident where Wildlife Services conducts a field investigation of dead or injured livestock, at the request of the producer; having some evidence to suggest possible predation, but lacking sufficient evidence to **clearly** confirm predation by a particular species, a kill may be classified as *probable* depending on a number of other factors such as (1) has there been any recently confirmed predation by the suspected depredating species in the same or nearby area? (2) How recently had the livestock owner or his employees observed the livestock? (3) Is there evidence (telemetry monitoring data, sightings, howling, fresh tracks etc.) to suggest that the suspected depredating species may have been in the area when the depredation occurred? All of these factors, and possibly others, should be considered in the investigator's best professional judgment.

problem wolf: wolf that has attacked livestock, or is a nuisance animal that could potentially compromise human safety

public safety problem or threat: any situation where the continued presence of a carnivore poses a threat to human safety; or, an attack has resulted in the loss of livestock or personal pets; or a human has been physically injured or killed

ROD: record of decision, sometimes called a decision document; a concise public notice that announces a state agency decision arrived at through the Montana Environmental Policy Act, explains the reasons for the decision, and explains any special conditions surrounding the decision or its implementation

regulated public harvest: category of legal of wolf mortality where wolves are killed under FWP Commission-approved seasons and regulations by licensed hunters or trappers; total harvest strictly controlled through permit or quota system; law enforcement as for other managed species

recovery goal: a total of 30 breeding pairs with equitable distribution throughout Montana, Idaho, and Wyoming for three successive years; breeding pair is defined as at least two adult wolves with at least two pups that survive to December 31; when the *recovery goal* is met, the U.S. Fish and Wildlife Service could initiate the process to remove the gray wolf from the list of threatened and endangered species protected by the Endangered Species Act

relisting: placing the a species back on the federal list of threatened or endangered species protected by the Endangered Species Act; relisting criteria may or may not be similar to delisting criteria; relisting requires evaluation of current status of species compared to criteria with regard to habitat, over utilization, disease/predation, existing regulatory mechanisms, and other factors affecting the continued existence of the species; if current status is not secure with regard to the 5 areas, a species may be relisted.

remove: to place in captivity or to kill under controlled conditions or in a controlled setting determined by management authorities

SB163: Senate Bill 163, Reclassify Certain Species for Management Purposes, passed during the 2001 session of the Montana Legislature and signed into law by Governor Martz

social group: a more specific definition of a wolf pack; in this document social group is defined as four or more wolves traveling in winter which is holding a territory and capable of reproduction

special kill permit: written authorization granted to a property owner by Montana Fish, Wildlife & Parks to kill or destroy a specified number of animals causing damage to private property; permits are only valid under a specific set of conditions or criteria

species in need of management: legal classification of nongame species that are designated by Montana Fish, Wildlife & Parks as needing special management regulations; Montana Fish, Wildlife & Parks, by regulation, establishes the limitations relating to taking, possession, transportation, exportation, processing, sale or offer for sale, or shipment considered necessary to manage nongame wildlife; Except as provided in regulations issued by the Department, it is unlawful for any person to take, possess, transport, export, sell, or offer for sale species designated by Montana Fish, Wildlife & Parks as "in need of management" (MCA 87-5-104 to 87-5-106)

take: to harass, hunt, capture, or kill or attempt to harass, hunt, capture, or kill wildlife

tri-state area: states of Montana, Idaho, and Wyoming, making up the northern Rockies wolf recovery area

unconfirmed: incident where Wildlife Services conducts a field investigation of dead or injured livestock, at the request of the producer; lacking sufficient evidence to classify an incident as depredation in contrast to other possible causes of death, it is classified as *unconfirmed*; it is unclear what the cause of death may have been. The investigator may or may not have much of a carcass remaining for inspection, or the carcass may have deteriorated so as to be of no use; in the context of wolf management, cause of death is attributed to a cause other than wolf predation

undocumented loss: livestock losses for which there is no apparent explanation for the loss; usually in the context of a numerical discrepancy between the number of livestock head at the beginning of the grazing season and what is retrieved at the end of the grazing season; evidence documenting a death is usually not found

USFS: U.S. Forest Service

USFWS: U.S. Fish and Wildlife Service

WMA: Montana Fish, Wildlife & Parks Wildlife Management Area

wolf-human conflict: where a public safety problem develops; a situation where an MFWP employee reasonably determines that the continued presence poses a threat to human safety, an attack has resulted in the loss of livestock or personal pets, or that a human has been physically injured or killed.

wolf-livestock conflict: where a wolf or wolves are loitering, testing, worrying, or otherwise disrupting livestock; also, a situation where a wolf is suspected to have killed or injured livestock or guarding animals

worrying: to disrupt, cause anxiety, make uneasy, or harass repeatedly or over a period of time; also, to seize, especially by the throat, with the teeth and shake or mangle

WS: U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services; federal work unit with responsibility to address and resolve damage caused by wildlife; examples include bird concentrations at airports or depredation on livestock

YNP: Yellowstone National Park

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APPENDIX 1

MONTANA WOLF CONSERVATION AND MANAGEMENT PLANNING DOCUMENT

DRAFT

PREPARED IN RESPONSE TO THE MONTANA WOLF MANAGEMENT ADVISORY COUNCIL RECOMMENDATIONS

JANUARY 2002

EXECUTIVE SUMMARY

The State of Montana recognizes the gray wolf as a native species and will integrate wolves as a valuable part of our wildlife heritage. Since 1973, the U.S. Fish and Wildlife Service (USFWS) has managed wolves as an endangered species in Montana, under the authority of the Endangered Species Act (ESA). Wolves are likely to be removed from the endangered species list within 3-5 years. Upon delisting, management authority for wolves will return to Montana Fish, Wildlife & Parks (MFWP). MFWP recognizes and accepts the challenges, responsibilities, and benefits of a restored wolf population. Managing gray wolves will not be easy, but wolf restoration is fundamentally consistent with Montana's history of wildlife conservation. Long-term persistence of wolves in Montana depends on carefully balancing the complex biological, social, economic, and political aspects of wolf management.

State laws and administrative rules become the primary regulatory and legal mechanisms guiding management. Upon delisting, the gray wolf will automatically be classified as a species "in need of management." MFWP and the MFWP Commission will establish the regulatory framework to manage the species thereafter. This Plan provides the foundation for wolf conservation and management upon delisting and describes a spectrum of management activities that maintain viable populations of wolves and their prey, resolve wolf-human and wolf-livestock conflicts, and gain the support of people with diverse interests. Much of it is based on the comments and recommendations of a diverse 12-member citizens group, the Montana Wolf Management Advisory Council, and an Interagency Technical Committee. MFWP intends to honor the diverse perspectives and interests of our citizens and the national public. The State will consider a spectrum of interests in designing and implementing a balanced, responsive program that recognizes the opportunities and addresses the challenges faced by people directly affected by wolves.

Wolves will be integrated and sustained in suitable habitats within complex management settings. The wolf program will be based on principles of adaptive management. Management strategies and conflict resolution tools will be more conservative as the number of packs decreases, approaching the legal minimum. In contrast, management strategies become more liberal as the number of packs increases. Ultimately, the status of the wolf population itself identifies the appropriate management strategies. Fifteen packs will be used as the trigger to change management, not as a minimum or maximum number of wolves "allowed" in Montana. MFWP does not administratively declare an upper limit or maximum number of individuals of any wildlife species in the state in the sense of a "cap." Instead, MFWP identifies population objectives that are based on landowner tolerance, habitat conditions, social factors, and biological considerations. Wildlife populations are then managed according to the objectives and current population status, using an array management tools.

Wolf distribution in Montana, as for other species, will ultimately be defined by the interaction of the species ecological requirements and human tolerance, not through artificial delineations that are administratively determined. Social acceptance of wolves transcends the boundaries of geography, land ownership, or land use designations just like a wolf pack territory boundary physically transcends them, too. An adaptive approach will help MFWP implement its wolf program over the range of social acceptance values now and in the future. Sensitivity towards and prompt resolution of conflict where and when it develops is an important condition of not administratively capping wolf numbers or defining distribution.

Ultimately, wolf distribution will probably encompass western Montana because of the predominance of public lands as compared to eastern Montana. Wolves will be encouraged on large contiguous blocks of public land, managed primarily as backcountry areas or national parks where there is the least potential for conflict, particularly with livestock. Wolf packs in areas of interspersed public and private lands will be managed in ways similar to other free-ranging wildlife in Montana and within the constraints of the biological and social characteristics, the physical attributes of the environment, land ownership, and land uses. Some agency discretion and flexibility will be exercised by necessity to accommodate the unique attributes of each pack, its history, the site-specific characteristics of its home range, landowner preferences, or other factors that cannot be reasonably predicted at this time. Management flexibility will be crucial in addressing all of the public interests that surround wolves.

On a broad scale, ungulate distribution and human settlement patterns largely define wolf habitat. MFWP ungulate programs link habitat and population management through sustained public hunting to achieve ungulate population objectives. In this way, MFWP takes an important habitat need of wolves into consideration. Our work, along with

the amount of land held in public ownership and adequate legal protections, provides long-term habitat availability for wolves. Federal land management agencies are increasingly managing lands from an ecosystem-level perspective, considering all components and functional relationships. Yellowstone and Glacier national parks function as refuges at opposite ends of the geographic extent of wolf distribution in the northern Rockies. The network of public lands in western Montana, central Idaho, and northwest Wyoming facilitates connectivity between the sub-populations. The legal protections and public outreach described in this plan help ensure the integrity of wolf movement and occupancy of habitats between refuges.

Wolf population management will include the full range of tools from non-lethal to lethal and will incorporate public outreach, conservation education, law enforcement, and landowner relations. Wolves do not exist in isolation from their environment, nor should an effective management program isolate wolves from their environment. Management actions will be evaluated in light of prevailing conditions or extenuating circumstances. Wolf populations will fluctuate as a result of management actions, natural mortality, legal harvest, illegal take, wolf productivity, and ungulate population fluctuations. If there are fewer than 15 wolf packs in the state, management tools are primarily non-lethal, particularly in backcountry settings and for public lands near national parks. Examples of non-lethal techniques include monitoring wolf locations using radio telemetry, changes in livestock husbandry practices, harassment, relocation, or attempts to modify wolf behavior. A minimum of 15 packs is required to use more liberal management tools, including lethal methods to resolve wolf-livestock, wolf-human conflicts, or concern over a localized prey population in light of the combined effects of predation and environmental factors.

When the wolf population no longer fits the definition of a species "in need of management" or when wolf numbers have increased and population regulation is needed, the MFWP Commission may reclassify the wolf as a big game animal or a furbearer. Regulated public harvest of wolves by hunting and trapping during designated seasons is one tool that may help MFWP manage wolf numbers. Through public input and MFWP Commission oversight, harvest regulations would describe legal means of take, license requirements, and reporting and tagging requirements. Total harvest would be strictly controlled through a permit or quota system, with season closures as soon as harvest objectives are reached. Regulated harvest of wolves would take place within the larger context of multi-species management programs. As wolf numbers increase and distribution expands, harvest opportunity would increase. Specific harvest objectives will depend on other losses to the wolf population, such as control actions for livestock depredation or loss of a pack because of intraspecific strife. Wolves could be promoted (on remote public lands) or discouraged (in areas with high livestock densities) depending on harvest objectives, district boundaries, and pack distribution. Hunting is not permitted in national parks. Harvest management would proceed adaptively, but all hunting and trapping is precluded if wolf packs totaled fewer than 15. Law enforcement by the MFWP Enforcement Division would also proceed similar to other legally classified wildlife species.

The primary wolf monitoring responsibilities will rest with MFWP. We will estimate wolf numbers and pack distribution, document reproduction, and tabulate mortality. Ecological understanding will also stem from documenting territory boundaries, the locations of wolf den and rendezvous sites, and identifying key prey species and foraging areas during winter and spring seasons. The monitoring program will balance scientific precision with cost effectiveness. We will use a combination of radio telemetry and non-invasive techniques.

Because of their long-term financial investments and willingness to restrict themselves when necessary, Montanans enjoy relatively liberal hunting seasons for more ungulate species than other western states. The financial investments and sacrifices made by the hunting public to restore ungulate populations are significant. Safeguarding those investments for present and future generations is an important priority for many of Montana's citizens and MFWP. MFWP seeks to maintain the public's opportunity to hunt a wide variety of species under a variety of circumstances, and to do so in a sustainable, responsible manner.

To proactively balance and integrate management of ungulate populations and the factors that influence them (including wolf predation), hunter harvest opportunity for ungulates may be adjusted. Hunter opportunity already changes in response to previous hunter success, hunter participation rates, access to private lands, or environmental events such as drought or severe winters. The presence of wolves within the yearlong range of a specific ungulate herd adds another factor for consideration among all environmental and human-related factors. MFWP acknowledges that changes in hunter opportunity may affect outfitters and non-resident hunters, in addition to resident hunters. If a local prey population is significantly impacted by wolf predation in conjunction with other

environmental factors, MFWP would consider reducing wolf pack size. Wolf management actions would be paired with other corrective management actions to reduce ungulate mortality or enhance recruitment. Concurrent management efforts for wolves and ungulates would continue until the prey population rebounded, recognizing that by the time prey populations begin to respond they may be influenced by a new set of environmental factors.

MFWP regularly surveys ungulate populations across a spectrum of their habitats. Information gathered from live populations is also supplemented by harvest information gathered at hunter check stations or through the telephone harvest survey. Ungulate monitoring efforts will be enhanced where wolf packs are established.

MFWP will share responsibility with Montana Department of Livestock(MDOL) in managing wolf-livestock conflicts because Montana statutes assign responsibility to both agencies to manage wildlife causing damage to livestock. Wolves can create problems for some livestock producers. Financial losses may result directly from wolf depredation. Indirect costs may accumulate because of increased management activities, changes in husbandry practices, or uncompensated losses. These financial hardships accrue to individual farmers and ranchers and may be significant to them. Addressing wolf-livestock conflicts will entail two separate, but parallel elements. One element is the wolf management activities carried out by Wildlife Services (WS) and MFWP to minimize the potential for wolf-livestock conflicts and to resolve the conflicts where and when they develop. Examples are providing technical assistance, investigating complaints, and taking actions that reduce the probability that the offending wolf or wolves will be involved in another depredation incident. The management programs will be funded, administered, and implemented by the cooperating agencies. The second element addresses the economic losses through a compensation program when livestock are killed or injured by wolves.

The two elements, management and compensation, are funded, administered, and implemented separately and independently of one another -- but parallel one another, united in the goal of maintaining a viable wolf population and addressing wolf-livestock conflicts. MFWP and MDOL will work together, along with WS, to address and resolve wolf-livestock conflicts through a Memorandum of Understanding (MOU). MFWP, in cooperation with MDOL, will contract WS to respond to landowner or livestock producer wolf depredation complaints, to conduct field investigations, and to carry out management actions. MFWP has the ultimate responsibility for determining the disposition of wolves.

Livestock producers should report any suspected wolf depredations (injuries or death) or the disruption of livestock or guarding animals to WS directly. If the investigating WS agent *confirms* that a wolf or wolves were responsible, subsequent management actions will be guided by the specific recommendations of the investigator, the provisions of this plan and by the multi-agency MOU. WS will be directed to take an incremental approach to address wolf depredations, guided by wolf numbers, depredation history, and the location of the incident. When wolf numbers are low and incidents take place on remote public lands, WS would use more conservative management tools. WS could apply progressively more liberal methods as wolf numbers increase and for incidents on private lands. Conflict history of the pack, attributes of the pack (e.g. size or reproductive status), or the physical setting will all be considered before a management response is selected. Management actions will be directed at individual problem wolves. Non-selective methods such as poison would not be used.

MFWP may also approve lethal removal of the offending animal by livestock owners or their agents. A special kill permit (issued by MFWP) is required for lethal control of any legally classified wildlife in Montana, outside the defense of life/property provision or MFWP Commission approved regulations. MFWP will not issue special kill permits to livestock producers to remove wolves on public lands when wolf numbers are low. If the number of wolf packs was at 15 or greater, MFWP may issue a special kill permit to livestock producers that would be valid for public and private lands. MFWP will be more liberal in the number of special kill permits granted as wolf numbers increase and for depredations in mixed land ownership patterns.

In a proactive manner, WS and MFWP will also work cooperatively with livestock producers and non-governmental organizations to help minimize the potential of wolf-livestock conflicts developing in the first place. Beyond technical assistance fro WS or MFWP and other collaborative efforts, livestock producers (or their agents) may non-lethally harass wolves when they are close to livestock on public or private lands. Private citizens may also non-lethally harass wolves that come close to homes, domestic pets, or people. Upon delisting, private citizens could kill a wolf if it is threatening human life or domestic dogs. Livestock producers or their agents could also kill a wolf if it

is attacking, killing, or threatening to kill livestock. This is consistent with Montana statutes that permit private citizens to defend life or property from imminent danger caused by wildlife.

Montana recognizes that wolf population recovery and persistence will result in the loss of personal property or income due to wolf activity and depredation. Compensation is critical to maintaining tolerance for wolves by livestock producers who are adversely affected by financial losses due to wolves. Montana would like to maintain and enhance the benefits of the compensation program. But compensation payments cannot be made from MFWP funds or matching federal funds intended for wildlife or habitat programs. The State of Montana intends to find or create an entity to administer a compensation program if Defenders of Wildlife rescinds eligibility of Montana ranchers upon delisting. The entity or non-governmental organization would be independent of MFWP and MDOL to retain impartiality and the terms and negotiations take place directly with the producer. Agency decision-making on the disposition of the problem animal is independent of the outcomes of the compensation negotiations. Producers would be compensated for *confirmed* and *probable* livestock losses at fair market value at the time of death and at fall value for young of the year. Eligible livestock include cattle, calves, hogs, pigs, horses, mules, sheep, lambs, goats, and guarding animals. Despite the present uncertainty of how a compensation program would be designed and administered, securing adequate funding for compensation is of equal priority as securing funding to implement the other state and federal agency management activities described in this plan.

Generally, wolves fear people and do not pose a significant threat to human safety. However, in extremely rare cases, individual wolves may gradually lose their fear of people and begin associating or interacting with people and/or loitering near buildings, livestock, or domestic dogs. While this behavior is extremely unusual for a wild wolf, it is more typical of a released captive wolf or wolf-dog hybrid. MFWP intends to reduce the potential for wolf-human conflicts and minimize the risks of human injury due to any large-sized canid. MFWP will utilize extensive outreach to inform the public, discourage habituation, and then respond to conflicts where and when they develop.

If a wolf (or similar large canid) loiters near ranch buildings or rural residences, MFWP will evaluate the potential risk to human safety, taking into account the setting, behavior of the animal, and the sequence of events. Across the spectrum of wolf distribution and numbers, MFWP will take an incremental approach. Potential actions include: increasing contacts within the local community, closely monitoring the situation, marking the animal with a radio collar to track its movements, aversive or disruptive conditioning, harassment, relocation, or lethal removal. A wolf could move through these areas, but length of stay and behavior will be important criteria for determining the appropriate management response. MFWP will require some degree of flexibility to be most responsive to public safety concerns. Although the management responsibility related to wildlife and human safety rests with MFWP, local law enforcement or other state of federal agency personnel may respond to a wolf-human incident if MFWP personnel are not available in a timely manner. In the unlikely need for defense of human life during a wolf encounter, citizens may use any means, including lethal force, to address an imminent threat.

MFWP will provide information to the general public about appropriate responses during wolf encounters (do's and don'ts) and how to minimize the potential for problems near homes and rural schools. This material will also include information about wolf behavior, body posture, tail position, vocalizations, etc. to help the public evaluate the situation, correctly interpret wolf behavior, and communicate the details accurately to agency personnel. An educational effort will also help the public understand the differences between wolves, mountain lions, and bears in terms of animal behaviors, potential risk of injury, appropriate human responses when threatened, and how to live and recreate outdoors in the presence of these large carnivores.

A successful conservation and management program for wolves ultimately depends on people and their attitudes. The history of wolves in Montana has as much to do with the relationship between wolves and people as it does with the ecology of the species. The same will be true of the wolf's future. MFWP recognizes the importance, value, and need for a sustained educational public outreach program to parallel wolf management activities. The objective is to provide scientifically based, factual information. A collaborative approach will also be necessary, but MFWP will take the lead.

During the first five years after delisting, MFWP will document that the wolf population in Montana is secure. MFWP will informally consult with the USFWS and cooperating partners on a regular basis, including a periodic formal review by the USFWS. USFWS will point out any deficiencies or areas of concern and recommend

corrective actions to MFWP. We would take the necessary corrective measures to avoid a relisting of the gray wolf under ESA. MFWP will undertake its own thorough, formal review after the first five years. Cooperating state and federal agencies will also participate. Findings of the review will be incorporated. The wolf management program will be subsequently reviewed at least every five years. A more frequent review is provided for within the adaptive management model. By definition, the model incorporates monitoring and evaluation components as an ongoing effort within the management program. Management is thus refined and improved through time as information and experience accumulate.

Equally important components of any wolf management program are the social factors that shape public tolerance for wolves and their satisfaction with how conflicts are resolved. MFWP anticipates that the public will readily identify real or perceived problems or shortcomings of the program. The challenge for MFWP will be to discern between earnest differences of opinion in preferred management direction and substantive shortcomings. Wolf management in Montana will take place within a complex biological, social, economic, and political environment. Difficult decisions will have to be made and will sometimes be called into question by various interests. However, the ensuing public dialogue will also help evaluate the program and lead to revisions. The Wolf Management Advisory Council recommended that the State of Montana continue to engage a diverse advisory citizen's group to collaborate on the management of wolves.

We are committed to using MFWP funds and matching federal funds to conserve and manage this native species on equal standing with other carnivore species. We also acknowledge that existing financial resources are not adequate to fully implement all aspects of this plan. Some of the activities described in this plan fall within existing duties and responsibilities already carried out by MFWP or WS, but some activities clearly add to existing responsibilities and workloads. Additional funding will be required to implement wolf management (and related activities) and compensation. While the monies and administrative procedures to fulfill these parallel functions may or may not originate from the same source, adequate funds for <u>each</u> element are necessary. We will seek additional funding from a diversity of sources, including special state or federal appropriations, private foundations, or other private sources.

The personnel and financial resources necessary to fulfill the responsibilities of wildlife conservation and management, law enforcement, assurance of human safety, public outreach, resolution of wolf-livestock conflicts, compensation, and program administration is an estimated $765,296 annually. The budget truly reflects the comprehensive nature of designing and implementing a wolf program in the broadest sense of the word.

The Governors of Montana, Idaho, and Wyoming are pursuing a program called the Northern Rocky Mountain Grizzly Bear and Gray Wolf National Management Trust. The Trust identifies, supports, and funds initiatives which address grizzly and gray wolf management, monitoring, other conservation needs, habitat protection, scientific research, conflict resolution, compensation for damage, and education/public outreach activities. The Trust prospectus will be forwarded to the respective Congressional delegations. In light of local funding shortfalls, we hope that the tri-state Congressional delegation will recognize the need for secure, long term funding to address the unique challenges associated with the conservation and management of these species of significant national interest. Another potential source of long-term funding is the Conservation and Reinvestment Act (CARA). Title III would provide annual appropriations to the states specifically for fish and wildlife programs, outdoor recreation, and conservation education. These funds are intended to fulfill a need for funding of less traditional management programs for species that are typically not hunted or fished. MFWP could use these funds for most elements of the wolf program but <u>not</u> for compensation. Both potential funding mechanisms are stable, long-term sources of funding and engage the national interests that desire to see wild, free-roaming wolves in the northern Rockies. While MFWP also recognizes the value of having free-roaming wolves in the northern Rockies, we also seeking financial assistance to conserve and manage the species in a complex setting. Finding the balance without adequate funding will be challenging.

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

The State of Montana recognizes the gray wolf as a native species and we are committed to recovery of the species within our borders. We will ensure that wolf population is maintained at numbers sufficient to preclude reclassification as "threatened or endangered" under federal law in the three-state area of Montana, Idaho, and Wyoming. The state intends to implement positive management programs to make sure that recovery is complete and wolves are integrated as a valuable part of out wildlife heritage. Montana Fish, Wildlife & Parks is already engaged in activities which promote wolf recovery through its efforts on ungulate population monitoring, research, and management, through the acquisition and designation of Wildlife Management Areas, purchase of conservation easements, and other efforts to preserve and restore wildlife habitats.

Gray wolves (*Canis lupus*) are thriving and expanding in number and distribution in Montana. This is because of natural emigration from Canada and a successful federal effort that reintroduced wolves into Yellowstone National Park (YNP) and the wilderness areas of central Idaho. There are probably more wild wolves in Montana now than at any time in the last 70 years. Since 1973, the U.S. Fish and Wildlife Service (USFWS) has managed wolves as an endangered species in Montana, under the authority of the Endangered Species Act (ESA). Wolves are likely to be removed from the endangered species list within 3-5 years.

Upon delisting, management authority for wolves will return to the state governments where wolves reside. Montana Fish, Wildlife & Parks (MFWP) is the resource agency charged under state statute with the responsibility to manage resident wildlife, including wolves. Beyond the legal commitments, MFWP recognizes and accepts the challenges, responsibilities, and benefits of restoring wolves as an important part of Montana's wildlife heritage. Managing gray wolves will not be easy, but wolf restoration is fundamentally consistent with Montana's history of wildlife conservation. The State of Montana will make a long-term funding commitment to the conservation of wolves, commensurate with existing programs for other managed carnivores. MFWP will commit state wildlife funds, matching federal monies, and other agency resources, but existing financial resources will not be adequate. Supplemental funding will be sought from public/private foundations, other private sources, and special federal or state appropriations.

As a state, we are collectively walking down an untravelled and difficult path in resource management. This document is a critical step in the process of Montana regaining management responsibility for wolves after a 28-year period of federal management. This document must not only assure the long-term persistence of wolves, it must also address the challenges of having wolves in Montana after such a long absence. It is unlikely that the state could assume management authority if this wolf management plan falls short. Fortunately, Montanans have a long tradition of rising to challenges and expressing interest and support for wildlife in our state. In fact, much of this Plan is based on the comments and recommendations of a 12-member citizens group, the Montana Wolf Management Advisory Council. An Interagency Technical Committee assisted the Council during their deliberations.

We understand that the long-term persistence of wolves in Montana depends on carefully balancing the complex biological, social, economic, and political aspects of wolf management. No single interest can dominate management direction. As we have before, we will rely on the best available information, use good judgment, and listen closely to people who care about Montana's resources and our lifestyle, now and into the future. The long-term persistence of wolves will also depend on securing adequate funding from a diversity of sources to fully implement conservation and management strategies.

Purpose of This Document

Before the gray wolf can be removed from the endangered species list, the USFWS must evaluate all the potential threats to wolves when the protections of ESA are removed and management responsibility is returned to the states. Among the requirements for delisting, the USFWS determined that the states of Montana, Idaho, and Wyoming must have management plans and other adequate regulatory mechanisms in place to ensure that the recovered wolf population will remain secure.

State management plans are the primary mechanism by which the USFWS can assess future threats to wolves in the northern Rockies and determine whether a well-distributed, viable population will be sustained. The purpose of this

document is to describe the regulatory framework for wolf conservation and management in Montana, under the direction of MFWP. This plan also describes the programmatic direction and a spectrum of management activities that maintain viable wildlife populations, resolve wolf-human and wolf-livestock conflicts, and gain the support of people with diverse interests.

Goal of the Plan

MFWP recognizes the gray wolf as a native species and is committed to maintaining a tri-state wolf population at numbers sufficient to preclude reclassification as threatened or endangered under federal law. Montana will support a proportionate number of wolf packs towards the northern Rockies recovery goal identified by the USFWS. An equitable distribution of packs among the three states is consistent with the biological intent of the recovery plan, will ensure a well-distributed and viable wolf population in the region, and will foster greater public acceptance of wolves in Montana. MFWP intends to honor the diverse perspectives and interests of our citizens and the national public. The State will consider the wide spectrum of interests in designing and implementing a balanced, responsive program that recognizes the opportunities and addresses the challenges faced by people directly affected by wolves.

Plan Development

As the State of Montana prepares to assume authority for wolves, it was recognized that the people of Montana have a significant stake in wolf-related issues, and they should be provided an opportunity to deliberate how wolves are managed. To fulfill this public trust, former Governor Marc Racicot signed an Executive Order creating the Montana Wolf Management Advisory Council (Council) in April 2000. The Council was composed of 12 volunteers from around the state who represented a variety of interests including tribal, agriculture, hunting, and wildlife conservation. They served voluntarily, at the request of the Governor. The Council was asked to advise MFWP as it prepared to assume wolf management responsibilities and to consider input from Montana citizens and other interested parties. The Council adopted the following as its Mission Statement:

"To assist MFWP in developing an implementable plan that will maintain viable wolf populations and is socially acceptable, biologically possible, and economically feasible."

Using an "interest-based" process, the Council identified and deliberated issues related to: defense of life and human safety, livestock depredation, compensation for livestock losses, management of prey populations, and wolf conservation and management. An Interagency Technical Committee advised the Council, providing scientifically based information about biological, technical, legal, or financial aspects of wolf management. The Council relied on the Technical Committee as their primary source of factual information. The Technical Committee also helped the Council identify and assess challenges associated with implementing overall management strategies or specific management actions. It was comprised of wolf experts and resource managers from the National Park Service (NPS), USFWS, U.S. Forest Service (USFS), Wildlife Services (WS), and MFWP.

With assistance from MFWP, the Council prepared a report of its findings, which originated from their personal experiences, interests represented by members, input from the public, and information provided by the Interagency Technical Committee. The Council arrived at their findings and recommendations by consensus. The Council's Chairman and the MFWP Director presented the report to former-Governor Racicot just before he left office. Upon taking office, newly elected Governor Martz was briefed of the Council's work. She directed MFWP to complete a state wolf management plan, using the Council's deliberations and written report as the foundation. The report consists of a Preamble, a Mission Statement, Guiding Principles, program goals, and general objectives. The Council specifically deferred to the expertise and discretion of MFWP in some areas. The *Montana Wolf Management Advisory Council, Report to the Governor* is included in this plan as Appendix 1.

HISTORY AND LEGAL STATUS OF WOLVES IN MONTANA

History

The gray wolf occupied most of the North American continent at the time of European settlement. Its range was reduced dramatically and wolves were extirpated from the east coast to the Ohio Valley by the 1880s. Gray wolves

were still fairly common throughout most of the northwestern United States until the early 1900s (Young and Goldman 1944).

In Montana, wolves were widespread throughout the state at the time of European settlement. Early trappers and explorers, including Lewis and Clark, recorded wolf sightings and encounters in their diaries. The first statewide bounty law passed in 1884 and wolf eradication in Montana began. In that first year, 5,450 wolf hides were presented for payment. Only 3 Montana counties (as they existed in 1900) failed to report a bounty payment for wolves from 1900-1931 (Riley 1998). By 1936, wolves were probably extinct in Montana, although they were occasionally observed and killed in the 1950s and 1960s (Curnow 1969, Singer 1979, Day 1981, Ream and Mattson 1982). No breeding pairs were known in Montana in the 1970s, and the occasional wolves taken were probably dispersers from Canada. In the 1960s, the Canadian Province of Alberta reduced its widespread predator control efforts (Ream and Mattson 1982). This probably resulted in higher survivorship and dispersal of wolves from Canada to Montana. Wolves were not legally protected in the U.S. until 1973, with the passage of ESA.

Pursuant to ESA, the Northern Rocky Mountain Wolf Recovery Team completed a recovery plan in 1980, with amendments added in 1987. The Plan designated three recovery areas (Northwest Montana, Central Idaho, and the Greater Yellowstone Area), each of which include some portion of Montana (Fig. 1). The USFWS determined that a total of 30 breeding pairs, with an equitable distribution throughout the states of Idaho, Montana, and Wyoming would constitute a viable, recovered population in the northern Rockies (USFWS et al. 2001). The number of breeding pairs is the measure by which the USFWS evaluates progress towards recovery. A breeding pair is defined as at least two adult wolves with at least two pups that survive to December 31. When a total of 30 breeding pairs is documented for 3 successive years, the USFWS will initiate the delisting process, which removes the federal protections conferred by ESA.

Wolves started naturally recolonizing the Glacier National Park (GNP) area of northwestern Montana in 1979. Reproduction was documented just north of GNP in 1982 (Ream and Mattson 1982). In 1986, the first wolf den in the western United States in over 50 years was documented within GNP (Ream et al. 1989). The newly colonizing wolf population in the GNP area fell within the Northwest Montana Recovery Area. Since then, new packs have established throughout western Montana. They were started by founders from Canada, the GNP area, and their descendants. Northwest Montana has supported a minimum of 5-7 breeding pairs since 1995 (USFWS et al. 2001).

As wolves recolonized northwest Montana, the other two recovery areas, Central Idaho and the Greater Yellowstone Area (GYA) remained devoid of wolves except for occasional reports of single or lone wolves. No reproduction had been documented in either area since the 1930s. In 1995 and 1996, the USFWS reintroduced a total of 66 wolves from Alberta and British Columbia into the wilderness areas of central Idaho and Yellowstone National Park (YNP), Wyoming. These reintroductions were undertaken on an experimental basis and the populations were considered non-essential to the survival of the species. The “experimental, non-essential” status of these wolves granted additional management flexibility. In 2000, the USFWS et al. (2001) documented 13 breeding pairs in the Greater Yellowstone Recovery Area and 9 pairs in the Central Idaho Recovery Area.

While the USFWS presently tabulates the number of breeding pairs by recovery area as a subtotal of the 30 total pairs required, the recovery area boundaries dissolve into the individual state boundaries upon delisting. Using the same definition of breeding pair, Montana had eight breeding pairs whose territories lie entirely within its borders in 2000 (USFWS et al. 2001). Three additional breeding pairs had territories that straddle the Montana-Idaho or Montana-Wyoming borders in 2000. There are other wolf pairs or small packs within Montana for which reproduction was not confirmed in 2000, but appear to have established a stable territory entirely within Montana. Several new packs appeared to form in 2001, but a final count of packs within

Montana’s borders will not be available from USFWS until early in 2002. In the interim, the USFWS updated its most recent annual report with unpublished data on wolf packs in Montana, as it was known in September 2001 (Fig. 2).

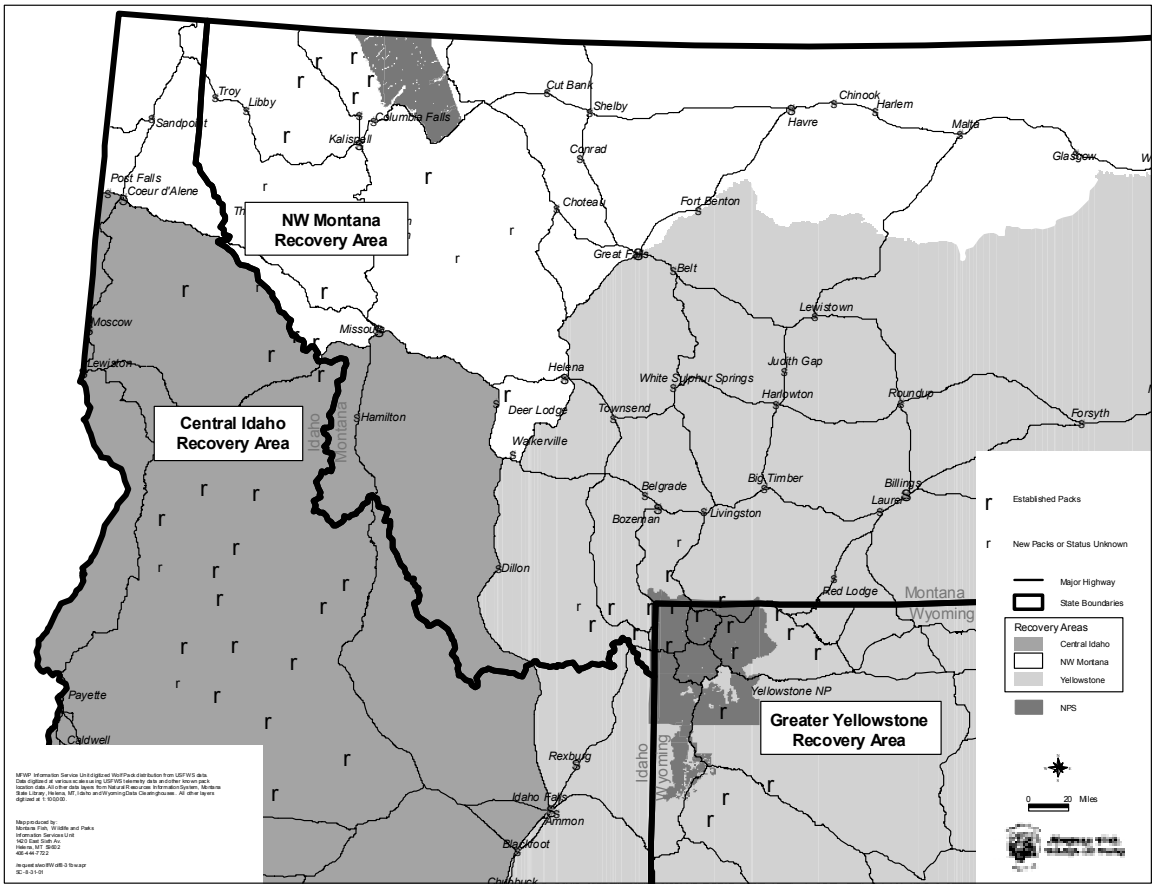

Figure 1. Wolf pack distribution in Montana, Idaho, and Wyoming and the recovery area boundaries. Large symbols represent established packs. Small symbols indicate newly-formed packs or packs whose status is unknown at the present time. (Source: USFWS et al. 2001 and USFWS unpubl. data as of September 2001).

Ongoing efforts by the USFWS and its cooperating partners to monitor wolves in the tri-state area have led to the discovery of new wolf packs successfully raising at least two pups in 2000. Because yearling wolves were captured in 2001, the pack must have successfully reared pups to December 31 in the year 2000. Therefore, the calendar year 2000 is the first year of the three-year count down in which a total of 30 breeding pair were tabulated towards the recovery goal. It appears that 2001 will be the second year since there are about 45 breeding pair that could potentially raise pups to December 31, 2001. If 30 breeding pair are again documented in December 2002, the USFWS could propose to delist wolves from ESA. The USFWS cannot delist wolves without the respective states first adopting conservation and management plans.

While the history of the gray wolf in Montana and its eventual return is a story in and of itself, the story is not complete without also acknowledging the history of prey populations over a similar time span and the role of Montana sportsmen and women.

No one really knows how many deer and elk were present at the time of the Lewis and Clark Expedition or even for decades thereafter. But before the 19th century was over, big game populations were depleted over most of the landscape because of excessive commercial and subsistence hunting. In 1867, Granville Stuart, an early conservationist and territorial legislator in Montana, acknowledged that the territorial legislature "needed to enact some laws or there will not be, in a few years, so much as a minnow or deer left alive in all the territory" (Brownell

1987). Enforceable wildlife conservation would finally begin with the political and financial support of Montana hunters and anglers early in the 20th century. Early programs emphasized restoring game animals and aggressive predator control. Even still, the Montana Legislature classified the grizzly bear as a game animal in 1923 so it could be protected from predator control programs – 50 years before there was an Endangered Species Act. The mountain lion was classified as a game animal in 1971 -- 2 years before ESA. Lion restoration was assured, not by the legal protections of ESA, but by the regulation of human-caused mortality and the restoration of prey populations. These successful programs were then, and, are now sustained by a philosophy of public hunting and a funding base from participants. These were imbedded in Montana culture starting with the earliest territorial residents.

Present day populations of white-tailed deer and elk are at their highest levels recorded in recent history. Mule deer numbers fluctuated over the last 20 years, but the statewide population is still robust. The sportsmen and women of Montana shepherded the restoration of those populations from all time lows. Because of their long-term financial investments and willingness to restrict themselves when necessary, Montanans now enjoy relatively liberal hunting seasons for more ungulate species than other western states. The restoration of native ungulate populations to former (and new) habitats and in large numbers facilitated wolf restoration. It is a rich heritage of which Montanans can be proud.

Legal Status and Classification under Montana Statutes

At present, USFWS and WS are responsible for wolf restoration and management activities. Federal laws provide guidance. When wolves are delisted and management authority is transferred to the State of Montana, state laws become the primary regulatory and legal mechanisms guiding management. Two Titles within Montana statutes describe the legal status and management framework for wolves. Title 87 pertains to fish and wildlife species and oversight by MFWP. Title 81 pertains to the Montana Department of Livestock (MDOL) and their responsibilities related to predator control. Most recently, the 2001 Montana Legislature passed Senate Bill 163 (SB163), which amended several statutes in both Titles. Governor Martz signed SB163 on April 21, 2001. The text of SB163 is presented in Appendix 2.

For now, the gray wolf remains listed as an endangered species under the Montana Nongame and Endangered Species Conservation Act of 1973 (87-5-101 MCA). The USFWS anticipates that wolf populations in the northern Rocky Mountains will meet the recovery goals in the near future. At that time, the USFWS will initiate the federal delisting process. Provisions in SB163 automatically remove the gray wolf from the state endangered species list, concurrent with federal action concluding that wolves are no longer endangered. Separate action by the Montana Legislature is not required, but MFWP would still need to update its Administrative Rule 12.5.201, which lists state threatened and endangered species.

Once removed from the state endangered species list, the gray wolf will automatically be classified as a species "in need of management." MFWP and the MFWP Commission will then establish the regulatory framework to manage the species (MCA 87-5-101 to 87-5-123). "Management" is defined in MCA 87-5-102 as:

> "the collection and application of biological information for the purposes of increasing the number of individuals within species and populations of wildlife, up to the optimum carrying capacity of their habitat, and maintaining such levels. The term includes the entire range of activities that constitute a modern scientific resource program including but not limited to research, census, law enforcement, habitat improvement, and education. Also included within the term, when and where appropriate, is the periodic or total protection of species or populations as well as regulated taking."

In Montana statute, "take" means to "harass, hunt, capture, or kill or attempt to harass, hunt, capture, or kill wildlife." Thus, MFWP and the MFWP Commission will establish the management parameters and regulations that limit taking, possession, transportation, exportation, processing, sale, offer for sale, or shipment of wolves. In addition, MFWP and the MFWP Commission will initiate the law enforcement, population monitoring, educational components, and other elements of a wolf program.

When MFWP and the MFWP Commission determine that the wolf population no longer fits the definition of a species "in need of management," the MFWP Commission may reclassify the wolf as a big game animal or a furbearer when wolf numbers have increased to the point where population regulation is needed. Regulated public

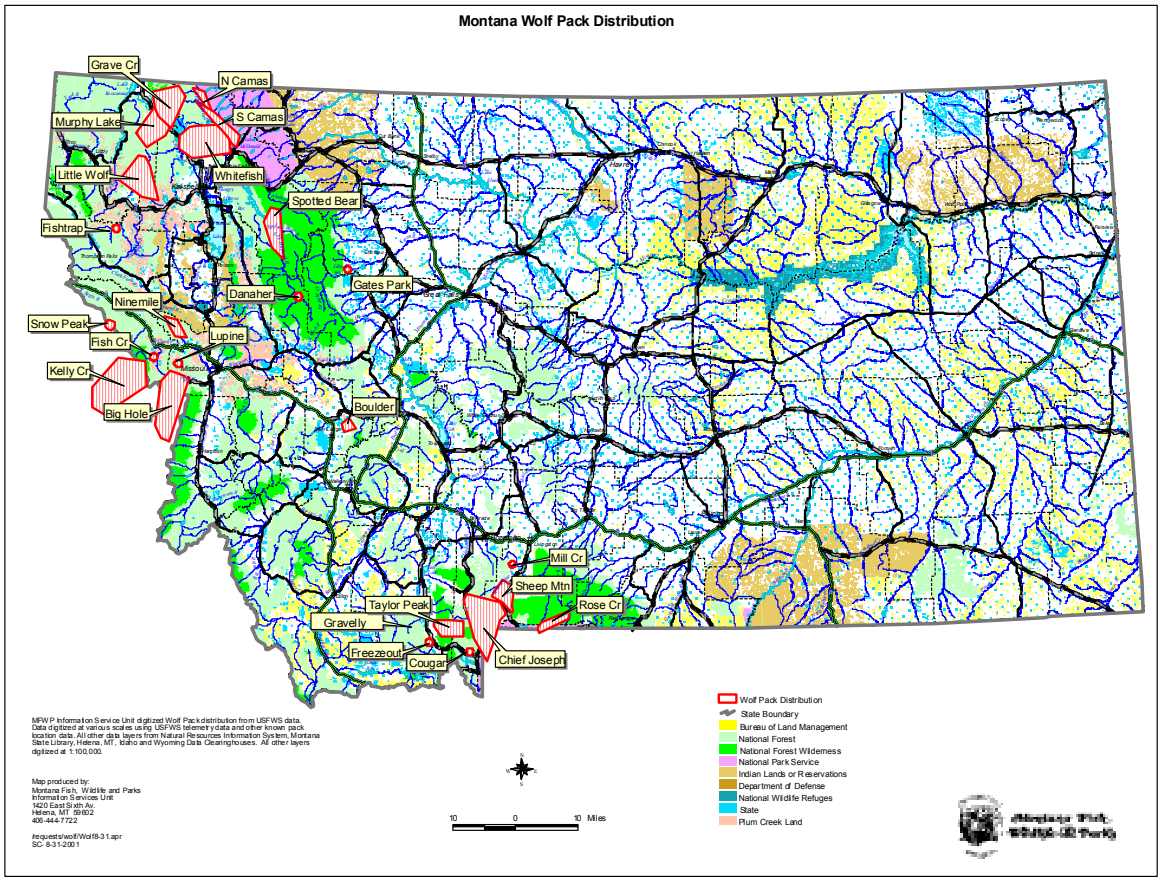

Figure 2. Wolf pack distribution by name and land ownership pattern in Montana. Approximate wolf pack territories are designated with horizontal lines. Gray tones represent public lands and white indicates private lands. (Source: USFWS et al. 2001 and USFWS unpubl. data as of September 2001).

harvest of wolves by hunting and trapping is one tool that may help MFWP manage wolf numbers. MFWP recommendations, public input, and MFWP Commission actions will establish the conditions and regulatory framework for the legal hunting and trapping of wolves in Montana. The Montana Legislature would establish the license fees and penalties for violations of Montana laws or MFWP Commission rules about the possession or harvest of wolves.

SB163 also amended Montana Statute 87-3-130, which is titled "Taking of Wildlife to Protect Persons or Livestock." This amendment becomes effective only when federal protections are removed. As amended, this Statute relieves a person from criminal liability for the taking of a wolf if the wolf is "attacking, killing, or threatening to kill a person or livestock." In addition, "a person may kill or attempt to kill a wolf or mountain lion that is in the act of attacking or killing a domestic dog." The definition of livestock includes ostriches, rheas, and emus. These changes are consistent with the concepts of protecting human life and private property (livestock and pets) when it is in imminent danger. Citizens must report any solves killed or injured in defense of life/property to MFWP within 72 hours.

Most importantly, SB163 resolved an element in Montana statute that was a major impediment to establishing the adequate regulatory mechanisms to guarantee the security and perpetuation of a recovered wolf population. SB163 deleted the gray wolf from the list of species designated as "predatory in nature" which are to be systematically controlled by MDOL (MCA 81-7-101 to 81-7-104). In other words, MDOL will not be required to exterminate wolves upon delisting. Instead, MDOL will control wolves for the protection and safeguarding of livestock, as long as the control action is consistent with a wolf management plan approved by both MFWP and MDOL. MDOL and MFWP will cooperatively address and resolve wolf-livestock conflicts using the management strategies described in this plan.

WOLF ECOLOGY IN THE NORTHERN ROCKIES

Physical Characteristics

Male gray wolves in Montana weigh 90-110 pounds, and females weigh 80-90 pounds. Wolves in the GYA are slightly heavier. Smith et al. (2000) reported that in 1999, winter-captured adult females averaged 108 pounds, while female pups averaged 96 pounds. Male pups averaged 107 pounds. About half of the wolves in Montana are black and the remainder gray. Both color phases may be found in a pack or in one litter of pups. White wolves, usually old animals, are occasionally seen. Tracks are normally 4.5 to 5.5 inches long (Harris and Ream 1983).

Wolves may resemble coyotes, particularly when wolves are young. Wolves may also be confused with some large domestic dog breeds. Wolves are distinguished from dogs by their longer legs, larger feet, wider head and snout, narrow body, and straight tail. Other distinguishing characteristics require closer examination than is possible in field settings with live animals. In many instances, behavior distinguishes between wild wolves, wolf-dog hybrids, and domestic dogs (Boyd et al. 2001, Duman 2001).

Pack Size

The gray wolf is a highly social species that lives in packs. Packs are formed when male and female wolves develop a pair bond, breed and produce pups. The pack typically consists of a socially dominant breeding pair (alphas), their offspring from the previous year, and new pups. Other breeding-aged adults may be present, but they may or may not be related to the others. Cooperatively, the pack hunts, feeds, travels, and rests together. The pack also shares pup-rearing responsibilities, including hunting and tending pups at the den or at a series of rendezvous sites. Pack size is highly variable (USFWS et al. 2001). In northwest Montana, it ranges from 2 to 11, and averages 5-7. In the GYA, pack size ranges from 5 to 27 and averages 9.3. Average pack size is larger inside YNP (14.6 individuals) than outside (5.8 individuals) (Smith et al. 2000).

Reproduction

Wolves normally do not breed until at least 22 months of age (Mech 1970). Breeding usually occurs only between the dominant male and female in a pack. In the northern Rockies, the breeding season peaks in mid- to late February

(Boyd et al. 1993). Wolves localize their movements around a den site and whelp in late April, following a 63-day gestation period. Wolves may be sensitive to human disturbance during the denning season. After the pups are about eight weeks old, they are moved to a series of rendezvous sites. In northwest Montana, maximum litter size averaged 5.3 (range 1-9) from 1982 to the mid 1990s. By December, average litter size declined to 4.5 (Pletscher et al.1997). In central Idaho, average litter size was 5.1 from 1996-1998 (Mack and Laudon 1998).

Pup survival is highly variable and influenced by several factors, including disease, predation, and nutrition (Mech and Goyal 1993, Johnson et al. 1994). In northwestern Montana from 1982-1995, 85% of pups survived until December, though survival varied year to year (Pletscher et al. 1997). Pup mortality in the first eight months of life was attributed to human causes (8 of 20 mortalities, 40%), unknown causes (2 of 20, 15%), and disappearance (9 of 20, 45%). In YNP, during the first four years, 133 pups were born in 29 litters and 71% were believed to still be alive in 1998 (Bangs et al. 1998). Pup survival varied between 73 and 81% from 1996-1998. However, canine parvovirus was strongly suspected as a contributing factor in the low pup survival (45%) in 1999. In 2000, pup survival rebounded to 77% (Smith et al. 2000). In central Idaho, 92-99 pups were produced between 1995 and 1998 (Mack and Laudon 1998).

Occasionally, more than one female in a pack may breed, resulting in more than one litter per pack (Ballard et al. 1987). This phenomenon has been documented in YNP (Smith et al. 2000, USFWS et al. 2000, USFWS et al. 2001). In 1999, one pack had two litters. In 2000, 13 wolf packs produced 16 litters. Occasionally this phenomenon leads to the formation of a new pack (Boyd et al. 1995).

Food Habits

The gray wolf is an opportunistic carnivore and is keenly adapted to hunt large prey species such as deer, elk, and moose. Wolves may scavenge carrion or even eat vegetation. In Montana, white-tailed deer, mule deer, elk and moose make up the majority of wolf diets. In northwestern Montana, white-tailed deer comprised 83% of wolf kills, whereas elk and moose comprised 14% and 3%, respectively (Kunkel et al. 1999). However, 87% of wolf kills in YNP during 1999 were elk (Smith et al. 2000). In central Idaho, elk (53%) and deer (42%) were the most frequently detected species in scat samples collected in summer 1997 (Mack and Laudon 1998). Ungulate species compose different proportions of wolf diets, depending on the relative abundance and distribution of available prey within the territory.

Wolves also prey on smaller species such as rabbits or beaver. Wolf scat collected in YNP in 1998 contained voles, ground squirrels, snowshoe hare, coyote, bear, insects, and vegetation (Smith 1998). Earlier work in northwestern Montana also documented non-ungulate prey species, such as: ruffed grouse, raven, striped skunk, beaver, coyote, porcupine, and golden eagle (Boyd et al. 1994).

Wolves also scavenge opportunistically on vehicle- or train-killed ungulates, winterkill, and on kills made by other carnivores, particularly mountain lions. Wolves in northwestern Montana scavenge the butchered remains of domestic livestock or big game animals at rural bone yards or carcass disposal sites. In most instances, private individuals discard these remains on nearby public land. Some northwestern Montana packs also scavenge ungulate carcasses cleared from local highways and left in a gravel pit by the Montana Department of Transportation. Wolves may also kill and feed upon domestic livestock such as cattle, sheep, llamas, horses, or goats. They may also kill domestic dogs but usually do not feed on the carcass.

Movements and Territories

A pack establishes an annual home range or territory and defends it from trespassing wolves. From late April until September, pack activity is centered at or near the den or rendezvous sites, as adults hunt and bring food back to the pups. One or more rendezvous sites are used after pups emerge from the den. These sites are in meadows or forest openings near the den, but sometimes are several miles away. Adults will carry small pups to a rendezvous site. Pups travel and hunt with the pack by September. The pack hunts throughout its territory until the following spring.

Pack boundaries and territory sizes may vary from year to year. Similarly, a wolf pack may travel in its territory differently from one year to the next because of changes in prey availability or distribution, intraspecific conflict with nearest neighbors, or the establishment of a new neighboring pack. Because the attributes of each pack's

territory are so unique (elevations, land use, land ownership patterns, prey species present and relative abundance, etc.), it is difficult to generalize about wolf territories and movements.

After recolonizing the GNP area in the 1980s, individual wolves dispersed and established new packs and territories elsewhere in western Montana. Wolves demonstrated a greater tolerance of human presence and disturbance than previously thought characteristic of the species. It was previously believed that higher elevation public lands would comprise the primary occupied habitats (Fritts et al.1994). While some packs have established territories in backcountry areas, most preferred lower elevations and gentle terrain where prey is more abundant, particularly in winter (Boyd-Heger 1997). In some settings, geography dictates that wolf packs use or travel through private lands and co-exist in close proximity with people and livestock. Since the first pack established a territory outside the GNP area in the early 1990s, packs in northwestern Montana negotiated a wide spectrum of property owners and land uses. These colonizers also settled across an array of rural development.

With the exception of GNP packs, wolves in northwest Montana move through a complex matrix of public, private, and corporate-owned lands. Landowner acceptance of wolf presence and the use of private lands is highly variable in space and time. Given the mobility of the species and the extent to which these lands are intermingled, it would not be unusual for a wolf to traverse each of these ownerships in a single day. Land uses range from dispersed outdoor recreation, timber production, or livestock grazing to home sites within the rural-wildland interface, hobby farming/livestock, or full-scale resort developments with golf courses. For example, private lands make up 55% of the Little Wolf pack's territory west of Kalispell (USFWS unpubl. data). The majority is owned by Plum Creek Timber Company and managed for commercial timber production. While technically private property, Plum Creek lands are generally open to public recreation. Livestock are present under a grazing lease between the company and a local grazing cooperative. The remaining 45% of the pack's territory is public land and managed for multiple uses. In contrast, individual citizens manage 53% of the private land in the Boulder pack's territory west of Helena for livestock production.

Private land may offer habitat features that are especially attractive to wolves so the pack may utilize those lands disproportionately more often than other parts of their territory. Land uses may predispose a pack to conflict with people or livestock, although the presence of livestock does not make it a forgone conclusion that a pack will routinely depredate. Domestic livestock are present year round within the territories of many Montana packs. For example, since the late 1980s, the Ninemile and Murphy Lake packs encountered livestock regularly, but caused conflict only sporadically.

The earliest colonizing wolves had large territories. Ream et al. (1991) reported an average of 460 square miles (mi^2). In recent years, average territory size decreased, probably as new territories filled in suitable, unoccupied habitat. In the Northwest Montana Recovery Area during 1999, the average territory size was 185 mi^2 (8 packs). Individual territories were highly variable in size, with a range of 24-614 mi^2 (USFWS et al. 2000).

Territories in the GYA were larger, averaging 344 mi^2 (11 packs). Individual pack territories ranged from 33 to 934 mi^2. Central Idaho wolf packs had the largest average territory size of 360 mi^2 (13 packs), with individual pack territories ranging from 141 – 703 mi^2 (USFWS et al. 2000).

Dispersal

When wolves reach sexual maturity, some remain with their natal pack while others leave, looking for a mate to start a new pack of their own. These individual wolves are called dispersers. Dispersal may be to nearby unoccupied habitat near their natal pack's territory or it may entail traveling several hundred miles before locating vacant habitat, a mate, or joining another pack. Animals may disperse preferentially to areas occupied by conspecifics (Ray et al. 1991). This appears true for the gray wolf, a species that utilizes scent marking and howling to locate other wolves (Ray et al. 1991). Boyd and Pletscher (1999) indicated that the dispersers in their study moved towards areas with higher wolf densities than found in their natal areas – in this case northward towards Canada. This has important implications for wolves in Montana, which now have conspecifics to the south and west in central Idaho and YNP. Dispersal has already resulted in the formation of several new packs in Montana (Fig. 2) (Boyd et al. 1995, USFWS et al. 2001). Wolves will probably continue dispersing from the core areas and slowly occupy landscapes between the Canadian border, central Idaho and northwestern Wyoming (USFWS et al. 2000).

Ultimately, this will yield a meta-population, capable of genetic exchange across the northern Rocky Mountains (Forbes and Boyd 1996, 1997).

Boyd and Pletscher (1999) studied wolf recovery in northwestern Montana from 1979 to 1997. Male wolves dispersed at an average age of 28.7 months and traveled an average of 70 mi from their natal territory before establishing a new territory or joining an existing pack. Females averaged 38.4 months old at dispersal and traveled an average of 48 mi. Males and females, combined, traveled an average of 60 mi (range 10 –158 mi). A captured sample of males and females dispersed at rates proportional to their occurrence. There were two peaks of dispersal: January-February (courtship and breeding season) and May-June.

The Yellowstone Wolf Project documented 36 dispersal events (18 females and 18 males) from 1995-1999 (Smith et al. 2000). Males dispersed an average of 54 mi and females dispersed an average of 40 mi. The longest recorded dispersal of a Yellowstone wolf to date was 221 mi. This Yellowstone-born male ultimately settled in central Idaho.

Increasingly, dispersal is being documented among and between all three recovery areas in the northern Rockies (Bangs et al. 1998, Mack and Laudon 1998, Smith et al. 2000). Combined, there were 21 known dispersal events in 2000 and 19 in 1999 (USFWS et al. 2000). Dispersal paths crossed international boundaries, state boundaries, public and private land boundaries, different land uses, and agency jurisdictions.

Mortality

Wolves die from a variety of causes, usually classified as either natural or human-caused. Naturally caused mortalities result from territorial conflicts between packs, injuries while hunting prey, old age, disease, starvation, or accidents. In an established Alaskan wolf population largely protected from human-caused mortality, most wolves were killed by other wolves – usually from neighboring packs (Mech et al. 1998). However, in the northern Rockies, natural mortality probably does not regulate populations (USFWS 2000). Humans are the largest cause of wolf mortality and the only cause that can significantly affect populations at recovery levels (USFWS 2000). Human caused mortality includes control actions to resolve conflicts, legal and illegal killings, as well as car/train collisions.

Pletscher et al. (1997) studied survival and mortality patterns of wolves in the GNP area. Total annual survival for this semi-protected population was a relatively high 80%. The survival rate for resident wolves was even higher (84%), but dispersers had a 64% chance for survival. Despite the high survival rates, humans accounted for the vast majority of wolf deaths. Of the 43 deaths investigated from 1982-1995, 88% were human-caused (56% legal, 32% illegal). Three wolves died of natural causes and two died of unknown causes.

More recent mortality data are available from the USFWS et al. (2001). In the Northwest Montana Recovery Area, there were at least 18 mortalities in 2000. Cause of death was known for 15. At least seven wolves were illegally killed, four died in agency control actions, and four wolves died from vehicle /train collisions. In the GYA, at least 20 wolves died in 2000, and the cause of death is known for 15. Nine wolves died due to human causes (six control actions, two vehicle collisions, one illegal) and six died from natural causes. Five additional mortalities were documented, but the causes were not readily apparent. These were either classified as unknown or unresolved pending further investigation. In the Central Idaho Recovery Area, 17 human-caused mortalities were documented in 2000. Control actions removed ten. One wolf died of natural causes and five more died from unknown causes.

Genetics

In recent years, the application of genetic techniques to the study of wildlife populations has permitted managers to address issues of genetic diversity and population viability with increased confidence. These techniques have yielded information relevant to wolf conservation and management in the northern Rockies. Wolf recovery in the northern Rockies advanced from the combination of recolonization of northwestern Montana by relatively few wolves from Canada and the reintroduction of wolves into YNP and central Idaho. In northwestern Montana, the founding population was small enough that inbreeding among closely related individuals was possible. Fortunately, the genetic variation among the first colonizers was high (Forbes and Boyd 1996). The combination of high genetic variation among colonizers and ongoing natural dispersal to and from Canadian populations was adequate to assure long-term population viability, provided that genetic exchange continued.

Similar concerns existed for the relatively small founding population reintroduced to YNP and central Idaho. But wolves were trapped from two distinct source populations in Canada. The genetic variation among reintroduced wolves (and the source populations from which they came) was also high (Forbes and Boyd 1997). Overall, heterozygosity was similar among samples of natural recolonizers, reintroduced individuals, and the Canadian source populations. Field studies of wolf dispersal and migration distances supported the genetic results (Ream et al. 1991, Boyd et al. 1995, Boyd and Pletscher 1999). Wolf populations in the northern Rockies should not suffer from inbreeding depression.

An underlying tenant of the wolf recovery and restoration program is that each state's wolf population is functionally connected so that genetic material can be exchanged among all three. In isolation, none of the three populations could maintain its genetic viability (USFWS 1994a, Fritts and Carbyn 1995).

Population Growth

Wolf populations increase or decrease through the combination and interaction of wolf densities and prey densities (Keith 1983, Fuller 1989). Actual rates of change depend on whether the wolf population is pioneering vacant habitat (as in YNP and central Idaho) or whether the population is well established (as in northwestern Montana). The degree and type of legal protection, agency control actions, and regulated harvest also influence population trends. Once established, wolf populations apparently can withstand human-caused mortality rates of up to 28-35% without declining (Keith 1983, Fuller 1989).

If protected, low density wolf populations can increase rapidly if prey is abundant. Keith (1983) speculated that a 30% annual increase could be the maximum rate of increase for any wild wolf population. Once densities were high enough, social interactions probably intensify. Intraspecific conflict and increased competition for food eventually cause the population to level off or decline (Keith 1983, Fuller 1989).

Wolf populations in the GNP area (northwestern Montana and southeastern Alberta) increased an average of 23% annually from 1986-1993 (Fritts et al. 1995). After 1993, the population leveled off (Pletscher et al.1997). Those packs produced dispersers that eventually colonized vacant habitats in western Montana (USFWS unpubl. data). Some packs which formed in the Northwestern Montana Recovery Area since the early 1990s persisted, but others did not. Packs have been lost due to illegal mortality, control actions where livestock depredation was chronic, and for other unknown reasons.

The average annual rate of increase from 1992 to 2000 in northwestern Montana was 4.7% (USFWS et al. 2001). In 1992, the minimum mid-winter count (including pups) was 41 wolves. Sixty-two wolves were counted in 2000. The highest count was 70 wolves, at the end of 1996. The population grew in some years, but declined in others. Some of the variation probably reflects true changes wolf numbers, but some variation may be due to monitoring inaccuracy or decreased monitoring effort.

Prey populations influenced recent wolf population dynamics in northwestern Montana. White-tailed deer populations expanded from the late 1970s through the mid 1990s, in part precipitating and sustaining increases in wolf numbers and distribution. However, the winter of 1996/97 was exceptionally severe, and white-tailed deer populations declined significantly (Sime, unpubl. data). Other prey populations also declined and poor recruitment was attributed to winterkill. The USFWS believes that the significant decline in natural prey availability led to the record high number of livestock depredations and subsequent lethal control. Wolf depredations on livestock in 1997 alone accounted for 50% of all depredations in northwestern Montana between 1987 and 1999. Smaller prey populations likely translated to decreased wolf pup survival in 1997 and 1998, compared to 1996. Ungulate populations rebounded in recent years and the wolf population is also nearing its 1996 level.

Wolf populations in the GYA and central Idaho areas exceeded all expectations for reproduction and survival (Bangs et al. 1998). Populations became established in both areas within 2 years, rather than the predicted three to five years. Pup production and survival in the GYA has been high. The average annual growth rate for the GYA from 1996-2000 is 35%, based on the minimum count as of December 31 and including pups (USFWS et al. 2001). However, population growth in the GYA slowed in 1999 after the rapid increase in the first three years post-

reintroduction (Smith et al. 2000). The average annual growth rate for this population is 36%, based on minimum counts on December 31 and including pups (USFWS et al. 2001).

It is likely that population growth rates will slow for both the core Yellowstone and central Idaho populations because of declining availability of suitable, vacant habitat. However, these populations will be a source of founders for new packs outside YNP, central Idaho, Wyoming, and Montana. While population growth slows or levels off in core areas, wolf numbers and distribution outside core areas are expected to increase rapidly in the next few years as wolves born in the initial pulse sexually mature and disperse to colonize vacant habitats elsewhere.

Pack membership typifies the predominant manner in which a wolf exists in the wild. The pack is the mechanism by which wolves reproduce and populations grow. However, in most wolf populations, some lone, nomadic individuals exist as dispersers -- looking for vacant habitat, waiting to be found by a member of the opposite sex within a new home range, or searching for an existing pack to join. Up to 10-15% of a wolf population may be comprised of lone animals.

This is a temporary transition. Wolves in northwestern Montana usually found other wolves in an average of 66 days (range 2-202 days) (Boyd and Pletscher 1999). Occasionally, lone wolves get into conflict with people and/or livestock, ultimately being lost to the population through legal or illegal means. For a wolf to make a contribution to the population, it must affiliate with other wolves. Until they affiliate with a pack, lone wolves are generally counted separately or omitted from population counts altogether because they do not contribute to population growth.

Interactions with Other Species

The relationships between carnivores and other species, and the ecosystems in which they live, could be the most poorly understood and controversial dimension of carnivore ecology (Estes 1996). The real question is not whether carnivores play important, unique roles in the natural functioning of ecosystems, but rather how they go about it, to what degree, and at what scale (Mech 1996).

Wolves could function as a “keystone species,” which exists at relatively low abundance, whose effect on its community or ecosystem is relatively large and involves multiple trophic levels (Power et al. 1996, Estes 1996). Despite the volumes of published literature on gray wolves, there is remarkably limited evidence of the precise nature, degree, and mechanisms by which the species demonstrates ecosystem-level effects.

Wolves kill ungulates, but the effects on ungulate populations are varied. Scavenging species, such as coyotes, common ravens, and wolverines feed on wolf kills. A wide variety of scavengers and other carnivores benefit from carrion being readily available year round, rather than just a pulse in the early spring because of winterkill (Stahler et al. 2001). Wolves may directly or indirectly compete for food with other carnivores (e.g. mountain lion) by selecting similar prey, or by usurping kills (Kunkel et al. 1999). Wolves have even been observed harassing grizzly bears in an attempt to take over ungulate carcasses (D. Boyd pers. comm.). Wolves sometimes kill other carnivores, such as mountain lions, coyotes, or grizzly bear cubs (White and Boyd 1989, Boyd and Neale 1992, Arjo 1998, Crabtree and Sheldon 1999).

VALUES OF WOLVES IN MONTANA

Biological

Predatory mammals such as the gray wolf are probably vital to the integrity of many ecosystems (Estes 1996). Interactions between top-level carnivores and prey species through evolutionary time has shaped and fine-tuned each one morphologically and behaviorally into what they are today. In the absence of those functional relationships, ecological systems may not be balanced.

Top-level carnivores may speed up nutrient cycling, provide carrion for other species, cull sick or weak animals, and contribute to biological diversity. Broader habitat management and conservation purposes are also served by the presence of large carnivores such as the gray wolf (Fritts et al. 1994). Providing and sustaining an adequate prey

base for wolves and other carnivores, requires that ungulates be carefully managed and their habitats protected, which ultimately benefits entire plant and animal communities.

Because wolves and other large carnivores have large home ranges, attention should be focused on the habitat values of both public and private lands. Private lands, in particular have substantial value to wildlife because they frequently occur at low elevations which moderate extreme weather conditions such as deep snow. Voluntary habitat conservation efforts, such as land or vegetation management plans and conservation easements will ultimately benefit many wildlife species.

Social, Cultural, Aesthetic

The social, cultural, and aesthetic values of wolves today grow out of a long and colorful history of interactions between wolves and humans. Early Native American Indians shared the landscape with the gray wolf. The wolf ultimately attained a cultural significance to many Native American tribes in Montana. For the Blackfeet, the wolf is a powerful religious symbol and is known as a "medicine animal" (Vest 1988).

In the days of European settlement and for decades thereafter, wolves were viewed unfavorably because they killed livestock during a period of dramatic declines in native prey populations. Wolves were also perceived as a negative, controlling influence on prey populations. However, public opinion about predators and wolves, in particular, evolved through the 1960s and 1970s. The gray wolf came to symbolize changing attitudes about wildlife, the environment, and public lands. Finally with the passage of the ESA and similar laws in the states, changing attitudes were institutionalized. Increasingly, the national public embraced the wolf as a symbol of wilderness and the call to save imperiled species. The calls were simultaneously reinforced by the media, which promoted broad public interest in wolves and their ultimate restoration into former habitats in the northern Rockies. Today, 62% of respondents in a national survey indicated that they were satisfied just knowing that wolves would be present in YNP (Duffield et al. 1993).

For some, the gray wolf symbolizes the diversity of American thought, values, and opinions. From persecuted beast, to dogged survivor, to the top of the food chain in America's first national park, the gray wolf's lot and human attitudes have gone full circle. Yet, there remains a great diversity in the social, cultural, and aesthetic values that Montanans assign to gray wolves.

Economic

Montana is well known for its national parks, wilderness areas, vast expanses of public lands, and a high quality environment that sustains healthy populations of native fish and wildlife. Visitors and residents alike enjoy hunting, fishing, wildlife viewing, and other forms of outdoor recreation. In 1992, YNP area residents reported a 90% rate of participation in wildlife viewing activities. Similarly, 94% of visitors who spent more than one day in YNP reported that their activities included viewing wildlife (USFWS 1994a).

The presence of wolves in Montana has contributed to the interest and visitation to national parks, as well as to the perceptions of Montana having diverse and abundant natural resources. It is estimated that more than 30,000 visitors to YNP from 1995-1998 saw wolves (Bangs et al. 1998). As of August 2001, 85,000 people have seen wolves in YNP (D. Smith pers comm.). The majority of nonresident visitors to Montana surveyed in 1999 ranked Glacier and Yellowstone national parks as their primary attractions. Of all the types of attractions in Montana, mountains, Glacier and Yellowstone national parks, rivers, open space, and wildlife were the top six, respectively (Parrish et al. 1997, Dillion and Nickerson 2000). The net benefits of wolf recovery alone were estimated at $10 million per year (Duffield et al. 1993).

In 1999, these attributes attracted 9.4 million visitors to Montana who spent an estimated $1.6 billion on goods and services. Expenditures increased about 4% over 1998 amounts. Since 1991, expenditures increased 2-7% each year, except 1996. Tourism is directly responsible for 30,000 jobs in Montana (6% of all jobs in the state) and supports thousands more indirectly (Cheek and Black 1998). Nonresident travel is an important part of the state's economy, on par with agriculture in terms of employment, and the wood products industry for total income (Cheek and Black 1998).

In Minnesota, wolf-related ecotourism has grown significantly. Similar growth may be possible in Montana. Already in Montana, guiding and outfitting services for nature tours, wildlife observation, wildlife photography, and "outdoor adventures" have grown in popularity. In fact, the employment growth of Montana's amusement and recreation industry is outpacing all the other travel-related industries (Dillion and Nickerson 2000). The presence of wolves diversifies the opportunities associated with this type of economic activity.

CHALLENGES OF WOLF PRESENCE IN MONTANA

Biological

One of the most fundamental challenges of wolf recovery and restoration is the uncertainty of the outcome, as a large carnivore that has been missing for decades resumes its functional role in the ecosystem. Biologists could only predict the effects of restored wolf populations on prey populations or other wildlife based on what was known from other places. It appears that many of the original predictions about the reintroduction to the GYA and central Idaho were accurate, at least in the short term (Bangs et al. 1998). However, it remains to be seen whether those predictions will be accurate over the long term.

The uncertainty about the nature, cause, magnitude, and mechanisms of wildlife population fluctuations is further complicated by the presence of wolves. The last time wolves were present with high prey densities, bison still roamed the Great Plains. Today, wolf-prey relationships are influenced by many factors, including habitat modification by humans, land management activities, changes in prey species distribution and numbers, economics, and social and political factors -- all of which, in and of themselves, are highly dynamic. Predator-prey relationships have been studied extensively; yet the results of each study are unique to the study area, and the conditions prevailing at the time the research was conducted (e.g. predator species present, predator density, prey species present, prey density, winter severity etc.).

How predator and prey populations respond to MFWP management activities is also uncertain. The history of wildlife management includes many examples of new approaches that grew out of experience and information gained along the way

Social, Cultural, Aesthetic

The challenge of the next decade will be how to manage the wolf, having been largely successful in saving the species from extinction in the lower 48 states (Mech 1995). The greatest challenges associated with wolf management often come from social and political issues rather than biological issues. Fritts et al. (1994) speculated that perhaps no other wildlife species is as affected by human perceptions and attitudes as the gray wolf.

Experience in Minnesota demonstrates that active management of wolf numbers and distribution is a necessity, given their reproductive potential and dispersal capabilities. It is unrealistic to expect that wolves could exist in 21st century settings as they did in at the time of Lewis and Clark. Management, including lethal removal, is necessary to address and reduce conflicts with livestock and humans, as well as to have a cost-efficient program (Mech 1995, Mech 2001). However, the same public sentiments that promoted wolf recovery and protection often oppose management and lethal removal of wolves (Mech 1995). This irony has led many wolf experts to emphasize the need for a balanced public outreach program that incorporates wolf control as a part of any wolf restoration program (Fritts et al. 1995).

In contrast, some livestock organizations and hunting advocates in the northern Rockies spoke out against wolf recovery and restoration efforts in the GYA and central Idaho, as well as against the legal protections afforded wolves by the ESA (USFWS 1994b). Opposition stemmed from concerns about wolf depredations on livestock and the associated economic losses, loss of management flexibility by federal land management agencies, land-use restrictions, impacts to big game populations, and reduced hunting opportunity. Despite many legal challenges, wolves were released. The USFWS worked to increase the tolerance and acceptance of wolves by those who expressed the greatest opposition or who would be affected the most by wolf presence. Resolution of conflicts in a safe, efficient manner was a priority. Upon delisting, Montana will face similar challenges.

Public opinions in Montana vary greatly. We have a dispersed rural population, an urban population concentrated in a few populous counties, an economy in which agriculture ranks among the top 3 industries, and expanses of public land that could support wolves. The spectrum of human values and attitudes about wolves ranges from total protection of the species to total elimination. These values are highlighted by urban and rural differences, by differences between residents of Montana, Idaho, and Wyoming and the national public, and by differences in the knowledge and understanding of wolf biology and the education of individual respondents (USFWS 1994a). These differences in values, attitudes, and opinions create a challenging environment in which to manage a controversial species.

Economic

One economic challenge of wolf presence in Montana stems from the real and perceived imbalance between the economic and social costs experienced by individuals, businesses, organizations, or agencies most directly affected by wolves and the economic and social benefits that accrue to those less directly affected. The costs and benefits do not accrue equitably to the same individuals, businesses, organizations, or agencies.

The USFWS predicted that some segments of the economy would be negatively affected and others would be positively affected by wolf restoration in the GYA and central Idaho (USFWS 1994a). Negative costs were predicted for livestock producers who experienced wolf-related livestock losses and for hunting-related businesses. Positive economic benefits were expected for businesses related to tourism, outdoor recreation, and national park visitation.

Individual producers may experience significant direct and/or indirect economic impacts due to wolf presence or depredation (Bangs et al. 1998). In the GYA and central Idaho recovery areas to date, confirmed wolf-caused livestock losses have been less than predicted (Bangs et al. 1998). Predictions were not made for the Northwestern Montana Recovery Area, although there has been at least one depredation event in every year except one, from 1987-2000. Producers could have other losses beyond what is confirmed and documented. Since 1987, a privately funded program paid a total of $150,000 for confirmed or highly probable wolf-caused livestock losses in Montana, Wyoming, and Idaho (Bangs and Shivik 2001). It is difficult to estimate the economic losses due to unconfirmed livestock losses or the indirect economic costs associated with wolf presence or depredation.

For hunting-related businesses such as outfitting, economic losses may be associated with decreased hunter opportunity or fewer recreational days afield, which ultimately may reduce hunter expenditures or participation rates. Ultimately hunter opportunity will probably fluctuate as predator and prey populations change through time. In northwestern Montana, prey populations declined in one hunting district on the western border of GNP after wolves established. This was due to the combination of predation by all carnivores in the area, intermittently low recruitment of fawns and calves, possible overharvest of antlerless elk, and natural mortality caused by severe winters (Kunkel et al. 1999, T. Thier pers. comm.). Similar decreases were observed in the elk population in the South Fork of the Flathead River, an area devoid of wolves during most of the same period (J. Vore pers. comm.). In that drainage, overharvest of antlerless elk was a contributing factor.

Although ecotourism is touted as a viable, sustainable way of generating economic activity through “low-impact” use of natural resources, ecotourism has potentially negative consequences. Risks to resources include increased infrastructure development, habitat degradation, wildlife disturbance, increased demands, and an erroneous perception that ecotourism leads to long-term protection of environmental assets (Isaacs 2000).

The State of Montana must also secure adequate financial and personnel resources to implement a wolf conservation and management program. While many aspects of this program fall within existing duties and activities already carried out by MFWP, some components clearly add to existing responsibilities and workloads. Existing budget and personnel resources cannot absorb this expansion. Other state and federal agencies will be similarly affected. The responsibility to address the economic challenges of wolf conservation and management resides with all interests.

WOLF CONSERVATION AND MANAGEMENT

Introduction

Montana's wildlife legacy includes a rich diversity of species. Throughout its 100-year history, MFWP has actively restored, perpetuated, and managed the fish and wildlife resources of the state. Some activities promoted wolf recovery, such as careful ungulate population management, research, and monitoring, the acquisition of Wildlife Management Areas (WMAs), purchase of conservation easements, and other efforts to preserve and restore wildlife habitats.

In keeping with the stewardship principles extended to other species, MFWP will conserve and manage wolves in concert with the rest of our wildlife heritage. These stewardship principles embody the ideals of conservation, implying the long-term persistence of wolves. Active management will also be required to address conflicts between wolves, people, livestock, and other wildlife species. Conservation and management are not mutually exclusive concepts. When taken together, our direction is to integrate and sustain wolves in suitable habitats within the complex biological, social, and economic landscapes using a variety of management tools. MFWP is committed to achieving this balance. In conjunction with our neighbors, Idaho and Wyoming, we will sustain wolf populations at secure levels which prevent reclassification under ESA.

In taking a balanced approach between conservation and management, MFWP will bring the gray wolf into the existing management framework, programs, and policies for other carnivores, such as mountain lions and black or grizzly bears. Even though black and grizzly bears are omnivorous, for the purposes of this plan, they are functionally included in the carnivore group with lions and wolves because of their predatory capabilities. Although each of these species is biologically unique, there are common threads to how they are managed. Elements of the gray wolf program will also overlap other existing programs, such as ungulate management and research, habitat, public outreach, law enforcement, and private landowner relations. A successful conservation and management program for wolves ultimately depends on people and their attitudes. An information and education program is discussed in a separate chapter.

Adaptive Management

MFWP's wolf program will be based on principles of adaptive management. Adaptive resource management provides a framework and a process for decision-making, which aligns management objectives and constraints, even when the outcome is uncertain. Decisions are based on current and future status of the resources. Through time, experience and knowledge accumulate. Research and management are conducted simultaneously in a coordinated fashion that improves management (Lancia et al. 1996).

An adaptive management program has 4 components: objectives, management alternatives, predicted outcomes of management activities (models), and a monitoring program. Initially, objectives are established. Next, a management alternative is selected from a range of liberal to conservative strategies and implemented. The monitoring program measures the outcomes and detects any changes. Measured outcomes are compared to the predicted outcomes, and the model is refined to more closely match what actually happened. Then, another management alternative is selected and implemented. Management actions change through time based on current resource status and how that compares with the original objectives.

Wolf Population Objectives

Montana shares a legal requirement with the states of Idaho and Wyoming to maintain a minimum total of 30 breeding pairs in the region. If each state were to sustain an equal number or ten pairs each, the biological intent of the recovery plan would be met -- so long as wolves were well distributed across the region. Based on ten years of experience in northwest Montana, not all packs are successful each and every year, 14-17 packs would be needed to achieve the minimum number of 10 breeding pairs with at least two pups on December 31 (USFWS unpubl. data). Montana will maintain at least 14-17 packs statewide. Given an average pack size of 5-7 members, between 70 and 119 wolves would be present in Montana, at the minimum. Montana habitats have the potential to support more than 17 packs, and there will be no administrative limit imposed on total pack numbers. MFWP does not administratively declare an upper limit or maximum number of individuals of any wildlife species in the state in the

context of a "cap." Instead, MFWP identifies population objectives that are based on landowner tolerance, habitat conditions, social factors, and biological considerations. Wildlife populations are managed according to the objectives and population status, using a range of management tools. A wolf MFWP will document, monitor, and manage all wolf packs within available habitats according to the adaptive management principles and conflict resolution tools described in this plan.

These population objectives identify a minimum number of packs that will meet the legal requirements. We assume that additional packs will become established and the actual number of packs in Montana when wolves are officially delisted will be above the minimum recovery criteria. As the number of packs varies through time, adaptive management principles come into play. Management strategies and conflict resolution tools will be more conservative as the number of packs decreases, approaching the legal minimum. In contrast, management strategies become more liberal as the number of packs increases. Ultimately, the wolf population itself identifies the appropriate management strategies. A wolf population of 15 packs is not considered a minimum or a maximum allowable number of packs. Rather, the value of 15 is used to signal a transition in management strategies from liberal to conservative, as the number of packs changes. The threshold of 15 packs was determined by examining the reproductive histories of the packs with the longest tenure. The Interagency Technical Committee also deliberated this value. It was ultimately recommended to the Council and formally endorsed.

Animals dispersing into Montana from YNP, central Idaho, and Canada will supplement the Montana wolf population. Similarly, Montana wolves will disperse out and supplement other populations. In the end, some or all packs are transitory. In order to maintain wolves at or above the recovery criteria, new packs must be able to replace those that die out or are eliminated. In the long run, exchange of wolves between and among the three areas will help ensure that minimum population objectives are met. Wolf population trends in the three recovery areas from 1987 to 2000 are shown in Figure 3.

Wolf Distribution

Nationally and within Montana, people have demonstrated a strong interest in restoring the gray wolf to its former historic range. Yet there have been dramatic changes in the landscape since wolves roamed Montana at the turn of the 20th century. Human settlement, the introduction of livestock and agriculture, and the current abundance and distribution of native ungulates make for a dramatically different landscape for wolves in the 21st century.

Due to the magnitude of these changes, the federal gray wolf recovery team identified areas with large tracts of public lands and adequate native prey as suitable habitats for wolf restoration. These were remote federal lands, designated wilderness areas (e.g. the Bob Marshall complex), and national parks. The recovery plan emphasized these areas because of the lower potential for conflict with livestock and people (USFWS 1987).

However, wolves in Montana readily use altered landscapes, even demonstrating preferences for low elevation agricultural or commercial timberlands. Federal lands at low elevations are typically managed for multiple uses and are intermingled with privately owned lands, resulting in a checkerboard pattern of mixed land ownership. When combined with the geography in Montana, approximately the western half of Montana provides suitable wolf habitat in the 21st century. Wolves exist within a full array of backcountry wilderness areas, multiple use lands, intermingled public and private lands, and wholly private lands.

Wolves can exist in many different habitats. However, wolf distribution in Montana will ultimately be defined by the interplay between ecological needs and social tolerance, as is the case for many other wildlife species such as deer, elk, bears, and mountain lions (Decker and Purdy 1988, Fritts and Carbyn 1995, Bangs et al. 1998, Riley and Decker 2000). People have different tolerance levels, values, and attitudes about wildlife and large carnivores in particular. Furthermore, tolerance varies in space and time and at different scales.

Social acceptance of wolves transcends the boundaries of geography, land ownership, or land use designations just like a pack territory boundary transcends those same delineations. An adaptive approach will help MFWP implement its wolf program over the range of social acceptance values now and in the future as values change.

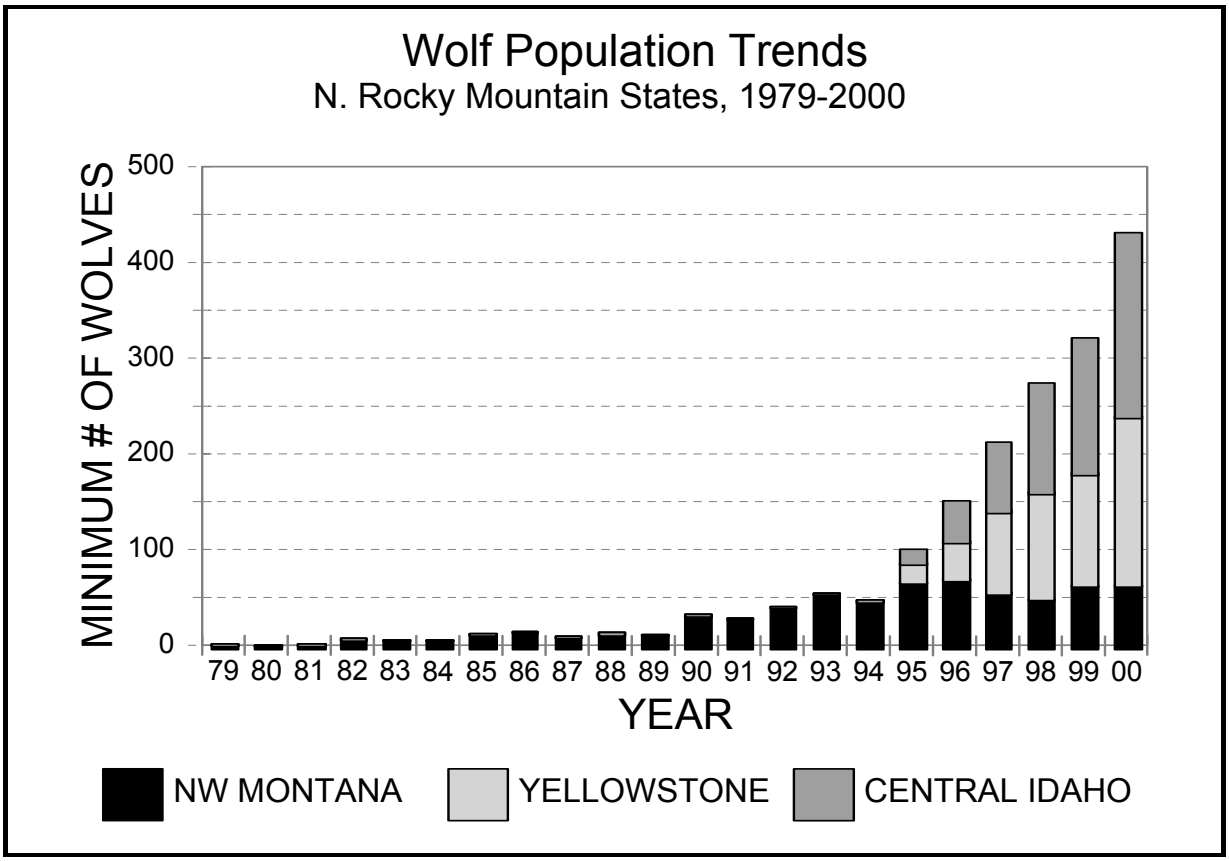

Figure 3. Grey wolf population trends in the Northwest Montana, Greater Yellowstone, and central Idaho recovery areas from 1979-2000. (Source: USFWS et al. 2001)

Present wolf distribution in Montana is presented in Figure 2. MFWP anticipates that wolf distribution will evolve through time due to the interplay of ecological needs and social tolerance. It will most likely comprise western Montana. Even in western Montana, wolf distribution will be discontinuous compared to the more homogeneous habitats and continuous wolf distribution typical of the upper Midwest. The distribution of deer and elk populations in high enough densities to support wolves is discontinuous because of marginal habitat conditions for ungulates or concentrated human settlements in intermountain valleys. Although there is an adequate natural prey base to support wolf presence in eastern Montana, most of the land base is privately owned. Most of the public lands in eastern Montana are grazed by domestic livestock during some part of the growing season. The higher frequency with which wolves conflict with livestock on public and private land makes it unlikely that a wolf pack could be sustained over the long term. However, wolf distribution would not be artificially restricted if social tolerance permits wolf presence. Indeed, the general distribution of all wildlife species in Montana is determined through the interaction of species' ecological requirements and human tolerance, not through artificial restrictions. In the case of wolves, the existence of a privately funded compensation program has helped to increase social tolerance for wolves. This subject is discussed in a later chapter.

By not establishing administrative limits to wolf distribution, wolves could disperse and move freely between northwestern Wyoming, central Idaho, and Canada. The capability to exchange genetic material among the sub-populations in the region is an important underpinning of wolf recovery and is required for long-term population viability. The absence of any presupposed boundaries of wolf distribution provides maximum flexibility to MFWP to accommodate wolf presence, address public concerns, and meet public expectations.

Montana's wolf program will emphasize large contiguous blocks of public land, managed primarily as backcountry areas or national parks where there is the least potential for conflict, particularly with livestock. Wolf presence will be encouraged on these lands. The national public identifies very strongly with public lands in western states, and it desires that these lands be managed according to the broadest interpretation of "public benefits." The national public strongly supported wolf restoration in the GYA and central Idaho (Duffield et al. 1993, USFWS 1994b). However, Montanans' opinions were less supportive (Tucker and Pletscher 1989). Nonetheless, the Montana public may be more willing to accept wolves on these remote public lands, particularly if conflicts are minimal and problem wolves are managed. Management strategies employed in these habitats will be more conservative, favoring wolf presence.

Outside backcountry areas, Montana is extremely diverse. With the complex mix of differing prey bases, land ownership, land uses, social tolerance levels, and potential for conflict, all possible combinations exist. Each unique combination could be termed a management setting, which is the suite of characteristics for a particular area with regard to the biological and social characteristics, the physical attributes of the environment, land ownership, and land uses. Wolf packs in areas of interspersed public and private lands will be managed in ways similar to other free-ranging wildlife in Montana. The management strategies outlined in this plan will protect human safety, integrate the wolf program with other MFWP program areas, and minimize conflict with livestock. Management strategies employed outside of backcountry areas depend on wolf population status, type and severity of conflict, land ownership, and social tolerance. While this plan will guide MFWP, some agency discretion and flexibility will be exercised to accommodate the unique attributes of each pack, its history, the site-specific characteristics of its home range, landowner preferences, or other factors that cannot be reasonably predicted at this time. Management flexibility will be crucial in addressing all of the public interests that surround wolves.

Population Management

The high reproductive potential and capability of wolves to disperse long distances make population management a necessity in many situations (Boyd and Pletscher 1999). Indeed, managing large carnivore populations is the next significant challenge beyond restoration (Mech 1995, Mech 1996, Mech 2001).

In Montana, the goal of wolf management is to balance wolf numbers and distribution within the constraints of the biological, social, and political landscapes. "Management" implies that cooperating agencies are actively engaged in activities which assure long-term population welfare and minimize the potential for conflict or resolve conflict where and when it develops. Agency actions are selected from a spectrum of possibilities and are aimed at matching the appropriate management tools to the situation. "Management" is not synonymous with lethal control. On the contrary, wolf population management will include the full range of tools from non-lethal to lethal and will incorporate other agency functions such as public outreach, conservation education, law enforcement, and landowner relations. Wolves do not exist in isolation from their environment, nor should an effective management program isolate wolves from their environment.

Management actions will be evaluated in light of prevailing conditions or extenuating circumstances. Wolf populations will fluctuate as a result of management actions, natural mortality, legal harvest, illegal take, wolf productivity, and ungulate population fluctuations. Taking all of this into consideration, specific management actions are guided by wolf population status, with a minimum of 15 packs required to use more liberal management tools. Liberal management tools include possibilities for lethal removal of wolves. If there are fewer than 15 wolf packs in the state, management tools are primarily non-lethal. Ultimately, under the statutory classification of "species in need of management" and in conjunction with the rules and regulations adopted by the MFWP Commission, wolves will be treated and managed like other wildlife species in Montana (e.g. big game, furbearers, or game birds).

Non-Lethal Methods

The intent of non-lethal methods is to avert or resolve a wolf conflict without killing the wolf or wolves in question. In many instances, non-lethal management tools effectively address the public or agency concern and are the most cost effective, least intrusive method. If successful, non-lethal methods may also alleviate the need for more intensive management actions in the future. Examples of non-lethal techniques include monitoring wolf locations using radio telemetry, changes in livestock husbandry practices, harassment of wolves, wolf relocation, or attempts

to modify wolf behavior. Non-lethal techniques specifically intended to modify wolf behaviors can be aversive or disruptive (Bangs and Shivik 2001). Aversive stimuli cause discomfort or pain to the animal after a wolf demonstrates certain behaviors. The repeated negative experience associated with certain behaviors may condition the animal to not repeat that behavior. Examples are taste aversion or electric shock collars. Disruptive stimuli attempt to prevent or alter behaviors by disrupting the animal when it behaves in undesirable ways. When disrupted by the stimuli, the animal is supposed to retreat. Examples are noise makers or siren devices triggered when a wolf approaches livestock too closely. The research arm of WS is actively investigating the utility and effectiveness of these techniques to avert wolf conflicts with livestock (Bangs and Shivik 2001). At present, these protocols are experimental and their efficacy is being evaluated.

MFWP will emphasize non-lethal management techniques if there are fewer than 15 wolf packs. Furthermore, in backcountry settings and for public lands near national parks, non-lethal methods will be preferred over lethal methods. In mixed land ownership patterns, non-lethal methods could also be used.

Livestock producers (or their agents) may non-lethally harass wolves when they are close to livestock on public or private lands. Private citizens may also non-lethally harass wolves that come close to homes, domestic pets, or people. The intent in allowing private citizens and livestock producers to non-lethally harass wolves is to avert a potential conflict by discouraging wolves from habituating to people or frequently visiting areas near livestock.

Sterilization procedures have some application for reducing wolf population increases under certain conditions (Haight and Mech 1997). Field-testing is currently underway in Alaska.

Lethal Methods

Wolf populations are strongly influenced by human-caused mortality. Wolves became extinct in Montana because of intensive human exploitation, and they ultimately recolonized after legal protections were instituted. Human-caused mortality still influences wolf populations today (Pletscher et al. 1997, Bangs et al. 1998).

Managing human-caused mortality will be an important component of wolf population management. However, MFWP management actions must also take into account other sources of wolf mortality that are beyond our ability to manage, such as car/train strikes. MFWP also recognizes that wolves may die because of illegal activities. The total of legal and illegal mortality, natural mortality, and random events will be the primary mechanism by which wolf numbers will change. Population monitoring will provide the necessary data on which decisions will be based, so that management can be adjusted accordingly without jeopardizing population welfare.

Legal Wolf Mortality -- Wolves could die in Montana for a variety of legal reasons.
Recent revisions to Montana statutes, which go into effect upon delisting, allow private citizens to kill a wolf if it is threatening human life or domestic dogs. Livestock producers or their agents could also kill a wolf if it is attacking, killing, or threatening to kill livestock – regardless of whether the incident takes place on public or private land. Any incident in which a wolf is injured or killed in defense of life or property must be reported to MFWP as soon as possible, but within 72 hours. The entire carcass must be returned to MFWP.

Upon confirming wolf depredation on livestock, WS may initiate lethal control actions subject to a Memorandum of Understanding between WS, MDOL, and MFWP. MFWP may also approve lethal control of the offending animal by livestock owners or their agents. A special kill permit (issued by MFWP) is required for any lethal control of any legally classified wildlife in Montana, unless there is an imminent threat to a person, dog, or livestock. If a wolf is killed on a special permit, the incident must be reported to MFWP as soon as possible, but within 72 hours. The entire carcasses must be returned.

MFWP intends to provide opportunities for regulated public harvest of wolves through hunting and trapping as the wolf population increases and it becomes appropriate to do so. Harvest management would proceed adaptively, but all hunting and trapping would be cease if wolf packs totaled fewer than 15. As the number of packs increases beyond 15, MFWP will assess population status and analyze potential management alternatives. A harvest-oriented alternative could be selected and the formal recommendations drafted. Then, MFWP solicits public comment on the proposal. A final recommendation is forwarded to the MFWP Commission for their consideration. This process would be similar to what is currently done for all other game or forbearing species. Through public input and

MFWP Commission oversight, harvest regulations would be established. Regulated hunting and trapping of wolves would take place within the larger context of multi-species management programs, rather than the context of single species management. As wolf numbers increase and distribution expands, harvest opportunity would increase. Specific harvest objectives will depend on other losses to the wolf population, such as control actions for livestock depredation or loss of a pack because of intraspecific strife.

Through annual MFWP Commission oversight and public input, hunting and trapping would take place under designated seasons and regulations which describe legal means of take, license requirements, and reporting and tagging requirements. Total harvest would be strictly controlled through a permit or quota system, with season closures as soon as harvest objectives are reached. Law enforcement by the MFWP Enforcement Division would also proceed similar to other managed wildlife species such as deer, with penalties for violations and restitution values established in Montana statute.

Fine scale population management would be achieved by the delineation of specific harvest districts with individualized harvest objectives. Wolves could be promoted (on remote public lands) or discouraged (in areas with high livestock densities) depending on harvest objectives, district boundaries, and pack distribution. Hunting is not permitted in national parks. Public harvest options would also considered in circumstances where a livestock producer has had problems with wolves harassing or killing livestock. In these circumstances, public harvest would be in lieu of a government control action.

There is a significant amount of published literature to assist MFWP as it initiates a public harvest program for wolves. Our Canadian neighbors manage wolf populations and address wolf conflicts using a diversity of management tools, one of which is a sustainable public hunting and trapping program – all in an environment very similar to Montana (Carbyn 1983, Bjorge and Gunson 1985, and Gunson 1992). All available information will be considered during the decision-making process.

Illegal Wolf Mortality -- Illegal wolf mortality occurs in Montana, despite the current protection of ESA. Some mortality was attributed to negative public opinions about the federal government's efforts to recover wolves, wolf activity in a new area, and public land management policies (Bangs et al. 1998). It remains to be seen whether illegal mortality will be a problem for future wolf populations managed by the state. Illegal mortality would result from public taking outside of the framework established by Montana statutes and MFWP Commission rules and regulations. Poaching, malicious killings, and mistaken identity losses would all be considered illegal. MFWP Enforcement Division will pursue cases of illegal wolf mortality, similar to other wildlife species.

Other Considerations

Trappers may incidentally catch a gray wolf in a trap or snare intended for other species. Trappers will be required to release the animal, if possible, and report the incident to MFWP. If the animal has debilitating injuries, the trapper must call MFWP for assistance and reporting.

Even though MFWP has a legal requirement to maintain at least ten packs, the wolf population could decrease to below or near recovery goal targets through an unpredictable combination of natural events and management actions. Within national parks, wolves will always be legally protected from intentional human-caused mortality beyond the context of a management removal. As long as wolf populations remain secure and viable, Yellowstone and Glacier national parks will be a source of dispersing wolves to reoccupy vacant habitats outside park boundaries if the Montana population decreased to levels near or below recovery goals. If population trends could not be reversed by conservative management strategies, MFWP would consider transplanting wolves into Montana from other secure populations. In reverse, a secure wolf population in Montana could serve as a source of animals for future restoration efforts elsewhere such as Colorado, where preliminary work documented that wolves could be sustained biologically (USFWS 2000). Transplanting wildlife to augment populations is a management tool that MFWP used to restore ungulate populations in the 1940s and 1950s and uses now for bighorn sheep.

Population Monitoring

For the first five years after the gray wolf is delisted, MFWP is required to document that the wolf population is at or above the relisting criteria. Beyond the legal requirement, MFWP will want to include wolves in the long history of

collecting survey and inventory data on fish and wildlife populations. These data create the foundation upon which all wildlife populations are managed. MFWP recognizes that beyond its legal requirement for population monitoring, its own interests are well served by collecting scientifically credible data. A thorough database will lead to the successful integration of the wolf program with other wildlife programs so that all may be managed in an ecological context.

The wolf monitoring program should document population status and trend through time. Specific objectives will be to estimate wolf numbers, document reproduction, and tabulate mortality. These data will yield a general demographic picture of the Montana wolf population. Additionally, information about wolf pack distribution, individual territory boundaries, how a pack moves through and uses its territory, locations of wolf den and rendezvous sites, and interactions between packs would be generated. Dispersal information could also be gathered. Special management needs, opportunities, and constraints could also be identified. Periodic review of these data by MFWP and its sister agencies in Idaho, Wyoming, or other cooperators will ensure that corrective measures are taken in a timely fashion if the regional population is in jeopardy.

Although the primary wolf monitoring responsibilities will rest with MFWP upon delisting, we benefit from the knowledge generated by the efforts and experiences of the wolf recovery program cooperators (NPS, WS, Nez Perce Tribe, USFWS, US Forest Service, universities, and private organizations). MFWP activities will be integrated into the regular program of work. A detailed database will assist MFWP in coordinating various wildlife program efforts. Although MFWP personnel will carry out the primary monitoring duties, opportunities for collaboration with other agencies, universities, non-profit organizations, volunteers, and tribal wildlife authorities will be pursued. Collaborative efforts could be necessary in the future as wolf numbers increase and distribution expands geographically across land management agency jurisdictions and Indian reservations. Partnerships will also improve the cost effectiveness of fulfilling Montana's responsibilities.

The monitoring program will balance scientific precision with cost effectiveness. Costs of data collection typically go up in proportion to their precision and the rigor required from the data. Financial and personnel limitations may sometimes preclude the most precise, reliable techniques. MFWP will rely on a combination of radio-telemetry and non-invasive techniques. The monitoring program will require greater accuracy and precision when there are 15 or fewer wolf packs. As the number of wolf packs increases, the need for precision decreases proportionally.

Some radio collars deployed by the USFWS will still be functioning when the state assumes management authority. MFWP will continue to monitor these existing collars and selectively deploy additional radio collars during the first five years after delisting. We will focus on newly formed packs about which little is known. We may also radio collar wolves which become available opportunistically. It will be important for MFWP personnel to gain knowledge and experience with wolves and for these skills to accumulate as rapidly as possible. Telemetry techniques will generate baseline information efficiently and help biologists learn about wolves. As knowledge and experience increase, MFWP will decrease reliance on telemetry and incorporate more non-invasive methods for basic survey and inventory data collection. Wolves captured while addressing conflicts will be radio collared prior to release.

The term "non-invasive" monitoring implies that information can be gathered without actually live-capturing and handling animals. Examples of non-invasive methods are track counts, howling surveys, observation report summaries, remote photography, and profiling of genetic material obtained passively from hair or scat samples. These methods can yield valuable information; however, for some monitoring objectives, validation using a radio-collared wolf pack is required for accuracy.

Track counts are most efficiently conducted during periods of snow cover. Track surveys could confirm presence or absence of wolves. If they are intended to estimate pack size, they must be done repeatedly to yield accurate information because wolves will literally step in each other's footprints while traveling in groups. MFWP presently conducts winter ground tracking surveys in a systematic fashion for furbearers using snowmobiles (MFWP 1995). US Forest Service (USFS) personnel also assist with these surveys. Wolf tracks are periodically encountered (B.Giddings pers. comm.). Existing routes may be adjusted to include the lower elevations frequently used by wolves in association with ungulate winter ranges. Separate routes, specifically intended for wolves, may also be established within pack territories, as they become known.

Wisconsin created a volunteer carnivore survey program in which interested members of the public do snow track surveys (Wisconsin Department of Natural Resources 1999). Participants, trained by the Wisconsin Department of Natural Resources, survey an assigned area several times a winter and forward their data in the spring. Volunteers did the surveys reliably and logged several thousand miles each winter. The method and program are still being validated with more intensive telemetry data, but it appears promising as a monitoring tool and it facilitates public involvement with wolf management issues (Wisconsin Department of Natural Resources 1999). Alaska conducts winter track surveys using aircraft. This method may be appropriate for some Montana packs.

In the late spring and summer months, howling surveys at rendezvous sites can help biologists determine whether a pack is raising pups. Pup vocalizations can easily be discriminated from adults. Although a precise count is usually not possible, wolf responses can indicate relative pack size. Since different packs react to artificial howls differently, howling surveys may not work in all cases.

Observational reports were useful to the federal wolf recovery program. Repeated observations of animals and/or sign in an area led to the discovery of new packs. Observational reports may also confirm pack persistence. Since it proved so valuable to the federal program, MFWP will add the gray wolf to its own Occurrence/Distribution Report and Track Observation Report forms (MFWP 1995). Similar information could also be gathered using hunter/trapper contacts (e.g. check stations or log books), the MFWP web site, Regional Headquarters offices, and the telephone harvest survey program.

MFWP biologists use remote photography to sample a variety of species. This technique could also be used to survey wolves on known travel routes to or from den or rendezvous sites or in conjunction with bait or scent stations.

Genetic profiling is the identification of unique individual wolves by analyzing genetic material isolated from cells extracted from hair, blood, or muscle tissue. Samples are obtained from wolves – either passively or from live-captured animals, yielding a unique genetic pattern similar to human fingerprints. Other information, such as maternity, paternity, dispersal, or overall genetic diversity can also be analyzed. A reservoir of genetic samples obtained from wolves in Montana, central Idaho, the GYA, and adjacent Canadian source populations already exists. MFWP will supplement the genetic database as samples become available.

Anecdotal information will supplement formalized monitoring protocols. Depredation investigations by WS yield important information, such as documenting wolf activity in a new area or the number of wolves involved in an incident.

Each monitoring protocol has its own advantages and disadvantages. No single method will be suited to all packs, either. MFWP will consider any and all methods, including new methods as they are developed. Corroborating evidence will be gathered using multiple methods, but specific protocols will be tailored to the pack, setting, and appropriate season for collecting that type of data. This will facilitate a balance between monitoring responsibilities, information needs, cost effectiveness, and scientific rigor.

Wolf Health and Disease Surveillance

Several diseases and parasites have been reported for gray wolves in the lower 48 states. Some had significant impacts on population recovery, especially for wolves in Minnesota, Michigan, and Wisconsin (USFWS 2000). However, in the northern Rockies, diseases and parasites were less influential and have not significantly impacted wolf populations to date (USFWS 2000). Nonetheless, adult wolves die from a wide variety of canid diseases or parasites. Pups may be especially vulnerable to death from exposure to canine parvovirus or canine distemper (Mech and Goyal 1993, Johnson et al. 1994). Monitoring and surveillance of wolf health will provide baseline information. Even though monitoring and surveillance would not stop a disease or parasite related decline, it could demonstrate a possible reason for the decline.

Wolf health is monitored by analyzing biological samples collected from dead and live-captured animals. During live capture operations, overall wolf health will be assessed, including presence of external parasites. Blood will also be collected. Blood tests can indicate exposure to canine parvovirus, distemper, and other potentially detrimental diseases. Necropsies will be performed on wolf carcasses to determine cause of death, condition, age,

reproductive status, and food habits. General protocols will be followed to collect reproductive tracts, stomach and colon contents, muscle tissue for genetic purposes, and any potentially diseased or parasitized tissues. Other sampling or testing may be conducted, depending on the request or concerns of the submitting party and the condition of wolf remains.

Carcasses and biological samples will be submitted to the MFWP Wildlife Laboratory in Bozeman. If warranted, tissues may be collected and forwarded to other laboratories for any specialized testing or forensic investigations. The Wildlife Laboratory will be the primary repository for stored samples and necropsy data, as is the case for some other species. Through time, baseline data will be compiled, which prove invaluable in the long run. As baseline data accumulate, the value of doing routine necropsies may diminish with time, and the submission of carcasses will be reduced to special forensics or disease-related cases. Increasingly, these functions are shared with the Regional Wildlife staff. Today's computer technologies enable locally collected data to be systematically collected and made available to MFWP personnel statewide. As these applications are further developed and refined, less responsibility will be borne by the Wildlife Lab and more will be borne in the Regions. MFWP will continue informal consultation and cooperation with the Wolf Project in YNP or other wolf researchers and managers.

In the unlikely event of human injury or death during a wolf-human encounter, the wolf or wolves will be lethally controlled and the carcasses forwarded to the MFWP Wildlife Laboratory. Carcasses will be tested for rabies or other pre-disposing health factors. If a wolf bites a person during a capture and handling incident, a blood sample will be drawn so it can be tested for rabies.

Wolf Specimen Disposition

Montana statutes permit citizens to possess the parts (antler, bone, skull, hide etc.) of lawfully taken big game, game birds, furbearers, and fish or the parts of animals that died of natural causes. Possessing parts of animals that died illegally or of unnatural causes is not permitted. For example, a citizen could pick up the antlers of an elk that died from starvation but could not cut off the antlers of a deer recently hit by a car. Wolf carcasses and parts will be discovered by or otherwise become available to the general public for a variety of reasons, including natural mortality, accidental death, agency control actions, defense of life or property, and regulated public harvest. Rules and regulations adopted by the MFWP Commission will govern possession of wolf parts. The general rule of thumb is that it is not legal to possess parts of legally classified wildlife unless there are provisions for a regulated public take – i.e. hunting regulations in the case of big game, trapping regulations for furbearers, or special regulations written for species in need of management. Possession and transport of gray wolf parts is also subject to the Convention on the International Trade in Endangered Species (CITES), similar to the bobcat and river otter (*Lutra canadensis*). The hides of bobcats, river otters, and wolves must be marked with a special tag. Tags are obtained from MFWP and are only affixed to animal hides taken by legal means. It would be illegal to possess a wolf, bobcat, or river otter hide without the CITES tag.

Any wolf carcass found in the field should be left alone and reported to MFWP. In the short term, MFWP or WS will conduct a field investigation and retrieve the carcass as a precautionary measure for public safety. In Idaho, nine wolf carcasses in the last two years were discovered on national forest land. The USFWS National Forensics Laboratory confirmed that these wolves were poisoned with Compound 1080, banned by the Environmental Protection Agency in 1972. This poison is extremely dangerous to human health, and no antidote exists. All carcasses, including those resulting from WS control actions or private actions through defense of life or property, will be transferred to the MFWP Wildlife Laboratory. A wolf database will be created and maintained. Eventually, the public will be able to keep wolf parts, consistent with the laws governing possession of other classes of wildlife species, such as big game or furbearer.

The entire carcass of wolves killed by private individuals in defense of life or property will be returned to MFWP and remain state property, regardless of whether the incident occurred on public or private lands. Upon confiscation, carcasses resulting from illegal killings also remain the property of MFWP.

If the hide, bones, and/or skull are in good condition, they can be salvaged and used for educational purposes. Priorities will be for research purposes, tribal cultural use, and general wolf education. These specimens may be transferred to other government agencies, non-profit organizations, tribal authorities, or educational institutions for general public benefit. Parts unsuitable for educational uses will be destroyed.

Research

Wildlife research in Montana is conducted by MFWP and through its cooperative partnerships with universities, non-profit organizations, tribes, and federal agencies. Permits to conduct research, particularly if live capture is required, are issued by MFWP to ensure that the work is scientifically justified and conducted in an ethical, responsible manner.

Research by MFWP and its partners will be an important component of the wolf program. Previous work on wolves in Minnesota, Alaska, or Wisconsin took place in settings and environments that are different from Montana. Although previous research findings will be applicable to some degree, wolves in the northern Rockies likely interact with their environments and their prey populations differently. This information will be important for sound policy formation and decision-making.

The Council identified a need for improved understanding of predator-prey relationships in Montana. Montana is home to a full spectrum of large carnivores that prey on ungulates. These same ungulate populations are also managed to sustain regulated public hunting and wildlife viewing. The dynamics of predator-prey systems are highly fluid and vary by the type of carnivores and ungulates present. Other environmental factors also influence the dynamics.

MFWP has been involved in cooperative research efforts with the University of Montana, Montana State University, USFWS, USFS, National Park Service, private landowners, and others. Ongoing investigations into the dynamics of wolf – elk interactions in the GYA are comprehensive. The broad scale approach will allow comparison of wolf predation and elk distribution for elk herds subjected to wolf predation only, elk herds subjected to human hunting only, and elk herds subjected to both wolf predation and human hunting. Research into other aspects of wolf ecology in YNP and central Idaho is ongoing. Investigations of the interactions between wolves, mountain lions, and grizzly bears are also underway. These efforts will result in an increased ecological understanding of wolf-ungulate interactions.

MFWP is also interested in evaluating specific management actions as to their efficacy and projected outcomes. This will be accomplished through a combination of the monitoring program within the adaptive management model and research efforts to evaluate management strategies or specific actions across all numbers of wolf packs and management settings.

Because the attention people pay to wolves is not balanced with the relatively minor impact wolves have on the lives of most people, wolf management will probably remain complicated, expensive, political, and controversial (Bangs et al.1998). Nonetheless, human attitudes are an important indicator of public support for wolves. Ultimately, positive human attitudes must be maintained in order to sustain a viable wolf population. Finally, human dimensions research could yield information about the attitudes and opinions of Montanans about wolves. This insight will help MFWP identify problems or areas of public concern so that we can target our work more effectively. There may be supplemental or alternative approaches to the coexistence of wolves and humans that do not require the direct manipulation or removal of wolves, as was identified for cougars (Riley and Decker 2000). New research needs may develop in the future.

Habitat Management

General

Ungulate distribution and human settlement patterns largely define wolf habitat. MFWP ungulate programs link habitat and population management through hunting to achieve ungulate population objectives. One keystone of MFWP's habitat program is Habitat Montana, which focuses on land conservation initiatives to benefit wildlife and maintain other natural resource values of private lands. The Forest Legacy Program is another habitat program for private forested lands. MFWP owns and manages a network of WMAs across the state to benefit wildlife (wintering ungulates in particular) and public recreation. By incorporating habitat elements within its ungulate program, MFWP is already taking the habitat needs of wolves into consideration. Our work, along with the amount of land held in public ownership, provides long-term habitat availability for wolves. Federal land management agencies are

increasingly managing lands from an ecosystem-level perspective, considering all components and functional relationships.

MFWP manages ungulate populations by balancing natural population fluctuations with public hunting. By definition, MFWP manages ungulate populations with the long-term welfare of the resource as the foundation. By maintaining healthy ungulate populations, MFWP assures that adequate prey will be available to sustain a wolf population.

In its downlisting proposal, the USFWS (2000) concluded that there were no foreseeable habitat-related threats or reasons to suspect a significant decline in native ungulate populations that could jeopardize a recovered wolf population. MFWP agrees with this conclusion and believes that its comprehensive ungulate program substantiates that finding.

Travel/Access Management

The responsibility for managing human access and travel on public lands resides with the administering land management agency, whether state or federal. Human access can be managed by time period (e.g. seasonal closures) or by localized area restrictions. Outside of Yellowstone and Glacier national parks, most federal lands utilized by wolves are administered by the USFS. The USFS manages access and motorized travel to meet management objectives or legal requirements. NPS restricts motorized travel to paved routes only, while foot/horse travel is permitted most places. In some circumstances, even foot travel is restricted due to seasonally imposed closures in areas of concentrated wildlife activity. MFWP closes most of its WMAs to human access during the winter period to prevent disturbance to wintering ungulates.

Wolves do not demonstrate any particular behavioral aversion to roads. In fact, they readily travel on roads, frequently leaving visible tracks and scat (Singleton 1995). New wolf activity is often confirmed in an area by searching roads for wolf sign. Research in the upper Great Lakes states examined road densities and wolf activity. In those flatter, more homogeneous habitats, wolves existed in higher densities in areas with lower road densities (Mech et al. 1988, Wisconsin Department of Natural Resources 1999). It would be difficult to extrapolate those results to our region because of differences in human population densities, habitat characteristics, and land physiography. The underlying concern about road density in the northern Rockies stems from the potential for illegal killing (Boyd-Heger 1997, Pletscher et al. 1997). Most researchers agreed that increased road densities reduced wolf survival (see summary in Boyd-Heger 1997). In the mountainous landscapes of the northern Rockies, wolves selected areas that were lower elevation, flatter, and closer to roads (Boyd-Heger 1997). However, an increased probability of human-caused mortality was associated with increased road use by wolves (Boyd-Heger 1997).

Whereas MFWP has and will continue to consult with land management agencies about access and travel management, MFWP has no legal authority to implement access or travel restrictions on land it does not own. Presently, there are no restrictions on road use or road-density on USFS or U.S. Bureau of Land Management lands due solely to the presence of wolves. Upon delisting, MFWP does not anticipate a need to suggest amendments to federal or state travel plans because of wolf activity. MFWP would encourage land management agencies to continue their assessments of habitat security for all wildlife species. Changes in this policy do not appear necessary. Some wolf packs outside national parks have private lands within their home ranges. Land-use or travel restrictions are not necessary for private lands, either.

Connectivity

Connectivity implies that wolves in each of the three states are functionally connected through emigration and immigration events, resulting in the exchange of genetic material between sub-populations. This functional relationship is consistent with the biological intent of the recovery plan and is an underlying prerequisite for successful wolf recovery in the northern Rockies. MFWP supports the continued recognition of functional ecological relationships by land and wildlife management agencies, private landowners, and conservation organizations.

Designation of actual habitat linkage zones or migration corridors is impractical for a habitat generalist and highly mobile species like the gray wolf. Between the mid 1980s and the late 1990s, about half of the packs recolonizing northwestern Montana did so outside of the anticipated recovery area and linkage corridors suggested in the recovery plan (Forbes and Boyd 1997, USFWS 1999). It appears that overall management for wolf survival across broad landscapes already used by wolves is more important than discrete corridors because of the dispersal rates and distance capabilities (Fritts and Carbyn 1995). Outside refuges such as national parks, legal protection and public education across broad landscapes will facilitate those functional connections across the region (Forbes and Boyd 1997). Yellowstone and Glacier national parks function as refuges at opposite ends of the geographic extent of wolf distribution in the northern Rockies. The network of public lands in western Montana, central Idaho, and northwest Wyoming facilitates connectivity between the sub-populations. The legal protections and public outreach described in this plan help ensure the integrity of wolf movement between refuges. No specific linkage corridors are proposed in this plan.

Sufficient dispersal and exchange of wolves between the three sub-populations will be necessary to maintain the high degree of genetic variation of a regional wolf population. In isolation, none of the three recovered populations could maintain its genetic viability over the long term (USFWS 1994a). Isolation is unlikely if populations remain at or above recovery levels and regulatory mechanisms prevent chronically low wolf numbers or minimal dispersal (Forbes and Boyd 1997).

Human settlement patterns, disjunct concentrations of wild ungulates, and diverse geography make it unlikely that wolves will ever be continuously distributed throughout the tri-state region. MFWP recognizes the imperative that wolves move within and between islands of occupied habitats. By default, dispersing wolves will travel through some habitats that are unsuitable for long-term occupancy because of the potential for conflict. Wolves will be permitted to move through these areas as long as they do not threaten public safety. Particular deference will be granted if the number of wolf packs is 15 or less. Relocation would be a potential management tool if continued presence is undesirable.

Wolf Den and Rendezvous Sites

Wolves respond differently to human disturbance (Claar et al. 1999). Differing responses were due to a variety of factors, including the individuality of wolves, the particular setting, and whether the population is exploited or protected (Ballard et al. 1987, Mech et al. 1998, Thiel et al. 1998). In some instances, wolves moved pups after human disturbance, but pup survival was not affected (Ballard et al. 1987). It also appears that pups are not moved over long distances (Thiel et al. 1998).

National Forest land managers in Montana have not instituted area closures or travel restrictions specifically because of localized wolf activity. Human recreational use of these lands is often of a dispersed, sporadic nature. Area closures around den or rendezvous sites in national parks are sometimes instituted because of high visitation numbers and the strong public desire to view wolves. The areas around dens in YNP are closed until June 30. Currently, there are no local area closures in GNP.

MFWP is not recommending any localized closures near wolf den or rendezvous sites on public lands outside national parks. In fact, an early survey in northwestern Montana indicated that public support to recover wolves would dwindle if recreational or commercial uses of public lands were restricted to promote recovery (Tucker and Pletscher 1989). The researchers did not quantify how rapidly public support would erode if changes in recreational or commercial uses were implemented. To date, they have not appeared necessary and they probably will not be in the future as wolves expand their distribution and increase in number. However, MFWP encourages land management agencies to consider the locations of wolf den and rendezvous sites and habitat security in their future planning activities in the same context as considering the locations of ungulate winter range or bald eagle nests. Ultimately, land management agencies may adopt seasonal or area restrictions independently from MFWP.

Captive Wolves and Wolf-dog Hybrids

The number of captive-reared wolves and wolf-dog hybrids in the U.S. could be as high as 400,000 (Hope 1994). Hybrids result from the breeding of *Canis lupus* with domestic dogs (*C. familiaris*), resulting in variable combinations of physical traits and behaviors. Much of the normal predatory behaviors of wild wolves disappeared

in domestic dogs. But the predatory instincts are still present to an unknown and unpredictable degree in wolf-dog hybrids. Although hybrids commonly lack a fear of humans, the animals are generally poorly adapted as domestic pets because their behavior is unpredictable and their response to general obedience training is poor. While the keeping of captive wolves and hybrids as pets is rewarding to some individuals, others find it unmanageable and try to find new homes for their pets. Hybrids have been released into the wild, presumably by frustrated owners. In Wisconsin, the frequency of wolf-dog hybrid encounters with humans or pets increased concurrent with increases in wild wolf numbers. From 1989 to 1998, there were 21 incidents involving 44 different released captives or hybrids, 33% of which were in 1998 alone (Wisconsin Department of Natural Resources 1999). The potential for genetic pollution of wild populations, human safety, and erosion of public acceptance for wild wolves are commonly cited problems with private ownership of captives or hybrids or release in the wild.

In the northern Rockies, the concern about genetic pollution is overstated. At present, there is no genetic or other evidence that captive wolves, wolf-dog hybrids, domestic dogs, and coyotes interbred with native Rocky Mountain wolves in the wild (Boyd et al. 2001). Wolves and coyotes can be easily differentiated genetically. However, genetic tests currently cannot distinguish between wild wolves, domestic dogs, and wolf-dog hybrids. Because domestic dogs evolved from wild wolves, they have similar genetic characteristics. It is unlikely that a released captive or wolf-dog hybrid would survive long enough to reproduce with wild wolves (Bangs et al.1998).

There are behavioral differences between wild wolves, wolf-dog hybrids, and captive wolves. Released captives and hybrids will typically associate with humans and loiter near human settlements. They may even be more likely to depredate domestic animals than wild wolves (Bangs et al. 1998). In the tri-state area, wolf-dog hybrids have been found in the wild sporadically since at least 1986 (Bangs et al. 1998). Two cases in 1997 were south of YNP. In each case the animal loitered on private property, scavenged, and one killed domestic sheep. Both animals were euthanized. Methods to distinguish non-native wolf-like canids from native wild wolves include a combination of genetic analyses, morphology, and behavior. Basic morphological differences between wild wolves and wolf-dog hybrids in the Great Lakes region are described by Duman (2001).

MFWP is concerned about the potential for captive wolves or wolf-dog hybrids to compromise human safety if they are released or escape from their owners. Wolf-dog hybrids have been responsible for human attacks, maulings, dismemberments, and deaths. Many incidents involved children. The animal's large size, lack of fear, and unpredictable behavior make it especially problematic. As of 1997, the Food and Drug Administration had not approved rabies or other vaccines for use with captives or hybrids. Despite lack of approved vaccines, many captive wolf or hybrid owners use the standard dog rabies vaccine. Nonetheless, there is still concern for public safety because vaccination status may not be known.

Wildlife professionals sometimes have trouble distinguishing a captive-reared wolf or a wolf-dog hybrid from a wild wolf. It is even more difficult for the general public. Negative experiences with rogue captives or hybrids can taint future public opinions about wild wolves and undermine tolerance for wild, free roaming wolves that normally fear humans.

It is legal to possess captive wolves and wolf-dog hybrids in Montana. Citizens may keep them as personal, private pets without a permit. Citizens wishing to publicly display captives or wolf-dog hybrids or to attract trade must have a permit from MFWP. Montana statutes (87-1-231) and administrative rules require the permanent tattooing of any wolf held in captivity, where "wolf" means a member of the species *Canis lupus*, including any canine hybrid which is one-half or more ($\geq$ 50%) wolf. Owners are also responsible for compensation and damages to personal property caused by any wolf that is held in captivity or that escapes from captivity. MFWP Enforcement Division maintains the database of tattooed captive wolves and wolf-dog hybrids.

At this time, MFWP does not seek to further regulate the ownership of captive wolves or wolf-dog hybrids. However, the State of Montana may seek statutory authority to do so in the future in the interest of public safety. There is a federal court ruling from a 1998 case in Mississippi upholding that state's ability to exercise legislative powers to determine and act on behalf of the safety interests of its citizens.

Upon delisting, MFWP will respond to incidents of free-ranging captive wolves or wolf-dog hybrids. WS, local animal control officers, or other law enforcement officers may also respond. If these animals loiter near people, their homes, or compromise public safety, they will be lethally removed. Incidents involving human injury will be

treated as if the animal were wild and non-vaccinated. MFWP assumes that at the time of delisting, wild wolf populations could sustain the removal of an occasional wild wolf mistaken for a released captive or wolf-dog hybrid. Free-roaming captives or hybrids captured at livestock depredation sites will be euthanized if attempts to locate the owner are unsuccessful. If the owner can be located, the animal will be returned, but its owner is financially responsible for compensation for damages or losses.

The MFWP Commission may consider adopting rules and regulations that prohibit the general public from removing wolves or wolf pups from the wild.

Ecotourism

With enhanced marketing, ecotourism associated with the gray wolf is a potential area for economic growth in Montana. In Ely, Minnesota, visits to the International Wolf Center generate approximately three million dollars in economic benefits to the local economy (Mech 1996). Now that the Discovery Center in West Yellowstone exhibits captive wolves, similar outcomes could be predicted for that community and the GYA. Over 9.4 million nonresidents visited Montana in 1999, up from 9.2 million in 1998. Glacier and Yellowstone national parks attract the most visitors to Montana and wildlife viewing is the most popular recreational activity (Dillion and Nickerson 2000).

YNP will probably continue as the primary destination for wolf-related ecotourism. While NPS strictly regulates commercial activity within parks, the surrounding public lands or other public lands in Montana could be alternative destinations for commercial guiding services for wolf viewing. Commercial activities on USFS lands are regulated through an internal permitting process. MFWP generally does not permit commercial use of its WMAs or State Parks. However, MFWP does welcome the general public to view wildlife on these lands.

While the ecotourism potential of wolf-related activities is significant, there could also be adverse effects, too. Increased human knowledge of wolf den and rendezvous site locations or increased visitation may lead to problems with chronic disturbance, premature home site abandonment, habituation, or even increased illegal mortality. The biological impacts of recreational or ecotourism-induced disturbance (e.g. howling) are difficult to predict for wolves because of the behavioral plasticity demonstrated by the species. General considerations are presented by Claar et al. (1999).

The Montana Department of Commerce's Board of Outfitters and the federal land management agencies are the licensing and oversight authority for commercial outfitting and guiding services in Montana. However, MFWP will promote ethical approaches to ecotourism through educational materials and through its partnerships with federal agencies and private non-profit organizations. Non-profit groups, such as the Timber Wolf Alliance, developed guidelines for ethical approaches to wolf watching and howling sessions in the Great Lakes states (Wisconsin Department of Natural Resources 1999). These materials could be readily adapted for use in Montana.

Law Enforcement

Since wolves will be classified as a "species in need of management" upon delisting, the MFWP Commission will establish rules and regulations pertaining to wolves, including the conditions and circumstances under which a private citizen may harass, kill, or possess a wolf. The MFWP Law Enforcement Division enforces those rules, along with other Montana statutes related to wildlife and human safety. MFWP enforcement personnel will coordinate with federal, local, and or tribal authorities as necessary.

The enforcement of new rules and regulations for wolves in Montana will be a high priority. Law enforcement authority for wolves as a "species in need of management" will be similar to other legally classified game or fur bearing species. Game wardens will go about their routine duties much as before, only there will be additional rules and regulations, specifically pertaining to wolves. These will be adopted by the MFWP Commission. Warden patrol duties and call-out response will be adjusted to include wolf responsibilities and duties. MFWP has a 1-800-telephone hotline (TIP-MONT) so that people could anonymously report observed or suspected violations of fish and wildlife or parks laws. This is an important tool for game wardens to receive information and respond to public requests. We anticipate that the public may also use the hot line to report possible illegal activity concerning wolves.

After an investigation, violations of the statutes, rules, or regulations will be prosecuted in cooperation with the county or district attorney for state or federal cases, respectively. In cooperation with the Courts of Limited Jurisdiction, penalties and restitution will be established for unlawful takings and rule violations. While Montana's penalties may not be as substantial as the penalties for violating ESA, they will be commensurate with other wildlife species to discourage criminal activity, particularly repeat offenses.

MFWP field wardens, biologists, or wildlife conflict specialists may respond to and resolve wolf-human conflicts. This is consistent with statutory responsibilities conferred upon MFWP for resource protection and public safety.

Generally, MFWP wardens will not investigate wolf-livestock conflicts, unless WS agents request field assistance. But wardens may assist landowners in contacting WS in cases of suspected depredation. When WS closes an investigation, MFWP wardens may help process field reports on suspected wolf depredation or transport carcasses similar to the current procedures for mountain lion, black or grizzly bear investigations. Montana statutes assign authority to MFWP and the MFWP Commission to issue special kill permits to landowners that enable a person to kill a wolf under specified conditions. Game wardens (or biologists) will have the primary responsibility for the field aspects of administration, implementation, and closing these cases.

Public education is a critical component of a successful law enforcement program. Significant public outreach is required to inform the public about the rules and regulations pertaining to wolves during the transition from federal to state management. The public will need to develop an awareness of the transition in management authority and the new rules and regulations. MFWP has many outlets to convey information, all of which will be utilized. See Appendix 8.

Implementation

Table 1 summarizes a spectrum of MFWP and WS strategies to manage and conserve wolves in Montana. Many activities fall within existing duties and responsibilities already carried out by MFWP or WS, but some activities clearly add to existing responsibilities and workloads. Some wildlife biologists, for example, will have new wolf monitoring responsibilities. Some segments of the public will expect the same intense level of monitoring and wolf control currently carried out by the USFWS and WS. MFWP field wardens will now investigate potentially illegal wolf mortalities. Other changes for wardens and/or biologists may include; working with landowners to address their concerns, handling/referring livestock damage calls, responding to wolf sightings and perceived threats to public safety, addressing hunter concerns and complaints associated with wolves, and responding to reports of injured or road-killed wolves. The MFWP Wildlife Laboratory will experience an increased workload associated with processing wolf carcasses, fulfilling wolf health and disease surveillance responsibilities, and filling educational requests. Other state and federal agencies could also be affected similar.

Additional resources will be required to implement these new responsibilities. Existing budget and personnel resources cannot absorb this expansion. Additional funds will be necessary for field-level and administrative personnel, technical training, public outreach efforts and materials, new equipment, and for daily operations to monitor wildlife populations or deliver an adequate public response to concerns about public safety. All interests share the responsibility of addressing the economic challenges of wolf conservation and management.

A draft budget is presented as Appendix 3. The budget outlines the personnel and financial resources necessary to fulfill the wolf monitoring responsibilities, disease surveillance functions, law enforcement, information and education initiatives, program administration, and WS activities carried out under the terms of the MOU. The budget truly reflects the comprehensive nature of designing and implementing a wolf management program. While this budget represents our best projection of the resources required, we cannot assess its accuracy until MFWP actually assumes management authority and begins implementation . Some components of the wolf program may not be captured fully by this draft budget. There may also be costs that could not be predicted at this time or were unforeseen. This budget will be refined in the future as MFWP gains more experience with wolf management. MFWP will pursue all possible funding sources including, but not limited to public/private foundations, federal or state appropriations, and other private sources. Adequate funding will be necessary to fully implement the wolf conservation and management provisions of this Chapter.

Interagency, Interstate, and Tribal Coordination

In the North American model of wildlife conservation, the states have almost sole authority over wildlife management, except for federal trust species (e.g. migratory birds or ESA listings), reserved federal lands (e.g. national parks), or Native American treaty rights. On tribally owned lands, the tribes maintain wildlife management authority. Because of the unique history and relationships between federal and state governments, tribes, the public, and wolves, restoration in the northern Rockies required the participation of all parties. It will take a high degree of cooperation and commitment among all parties to sustain the population.

Table 1. The spectrum of management activities to manage and conserve wolves in Montana. The adaptive management model calls for selection of different management strategies as the number of wolf packs changes from less than 15 to 15 or greater. The different management settings (Public Lands and Mixed Land Ownerships) call for different strategies, depending on landownership patterns, social factors, land use patterns, biological constraints, and the physical attributes of the environment. Some management strategies may apply across all numbers of wolf packs or management settings, as indicated by the right arrows.

	WOLF PACK NUMBER			
	Less Than 15 Packs* ←		→ **15 Packs or Greater**	
	Public Lands *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*	**Public Lands** *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*
Montana Fish, Wildlife & Parks Conservation and Management Strategies	Adaptive management	→	→	→
	Integrate with ungulate management	→	→	→
	Health and disease surveillance	→	→	→
	Population monitoring	Enhanced population monitoring	Limited monitoring to determine pack status	Enhanced monitoring in selected areas
	Research to improve understanding of wolf-ungulate interactions	→	→	→
	Research to evaluate specific management actions	→	→	→
	Law enforcement, high priority	→	Law enforcement	→
	Public outreach to inform and address specific needs	→	→	→

Table 1. Continued.

Table 1. Continued.

	WOLF PACK NUMBER Less Than 15 Packs* ← | → 15 Packs or Greater			
	Public Lands ***(backcountry areas & near National Parks)***	**Mixed Land Ownerships** ***(interspersed public and private lands; interspersed agriculture)***	**Public Lands** ***(backcountry areas & near National Parks)***	**Mixed Land Ownerships** ***(interspersed public and private lands; interspersed agriculture)***
Montana Fish, Wildlife & Parks	Interagency, tri-state coordination →	→	→	→
	Summarize annual mortality; track pack numbers using USFWS definition →	→	Summarize annual mortality; track pack numbers using combination USFWS definition and other techniques	→
	Ensure human safety; discourage wolf habituation →	→	Discourage wolf habituation; more proactive removal of potential problem wolves	→
	No regulated hunting and trapping	No regulated hunting and trapping; licensed sportsperson may be used to resolve conflict w/ livestock in lieu of government response	Regulated hunting and trapping w/ MFWP Commission oversight; conservative harvest on quota or permit system w/ mandatory reporting	Regulated hunting and trapping w/ MFWP Commission oversight; harvest on quota or permit system w/ mandatory reporting; harvest quota more liberal as pack #s increase
Wildlife Services Management Strategies	Incremental approach, conservative →	→	Incremental approach; lethal removal of problem wolves more liberal	Incremental approach; lethal removal may be 1st, especially on private land
Private Citizens	Non –lethal harassment →	→	→	→
	Lethal take in defense of life/property →	→	→	→

***** Montana shares a legal requirement with the states of Idaho and Wyoming to maintain a minimum total of 30 breeding pairs in the region. Since not all packs successfully breed and have pups every year, Montana will maintain at least 14-17 packs statewide to insure achievement of a minimum number of 10 breeding pairs with at least two pups on December 31.

Individually, the states of Idaho, Montana, and Wyoming will be responsible for wolf conservation and management within its own borders. But collectively, it is in the best interests of all three states for wolf populations to remain secure within the region. If the regional wolf population falls below the relisting criteria, legal protections and management could revert back to the federal government. The State of Montana also recognizes the ecological and cultural significance of wolves to Native Americans and encourages their participation within the tri-state region.

To meet the goals of the wolf program, interstate coordination will require that field personnel exchange biological data. Important issues will include the population status and trend within each state, the disposition of cross-boundary packs, and whether there are foreseeable problems with achieving the goals and objectives. Information will also help states improve techniques and monitoring protocols. Collaborative research projects at regional scales may also be developed, coordinated, and implemented. Periodic administrative coordination will also be required. Collectively, this will facilitate a problem-solving atmosphere for issues that are common to all parties.

Within Montana, interagency coordination between MFWP, WS, and MDOL at the programmatic and field levels will be necessary to successfully implement the plan. At the field level, biologists and game wardens will need to work closely with the WS agent in their area to achieve a timely and appropriate management response, as well as ensure accurate record keeping. Moreover, collaboration at the field level can be beneficial to achieve management or research objectives with greater efficiency on a variety of topics, such as remotely triggered deterrent devices or trapping methods. At the programmatic level, coordination is required to develop a Memorandum of Understanding between MFWP, MDOL, and WS which will outline the responsibilities and activities of each agency, as well as how the agencies will coordinate decision-making.

PREY POPULATIONS: CONSERVATION AND MANAGEMENT

Introduction

Wolves return to a highly modified environment and a managed system. The success of major predators like mountain lions or wolves and human hunters rests on the same foundation: the productivity and perpetuation of deer, elk, and moose populations. As a result, the effects of predators on prey populations were some of the greatest concerns expressed by the public about wolf recovery in the northern Rockies (USFWS 1987, 1994a,b). The financial investments and sacrifices made by the hunting public to restore ungulate populations are significant. Safeguarding those investments for present and future generations is an important priority for many of Montana's citizens and MFWP. MFWP seeks to maintain the public's opportunity to hunt a wide variety of species under a variety of circumstances, and to do so in a sustainable, responsible manner.

Predator – Prey Interactions

All wildlife populations are inherently variable through time and across a diversity of habitats. The idea of population stability is a misnomer. Rather, populations fluctuate through time and are influenced by a variety of environmental factors that also change through time. Management may affect some factors but not others, and at best only moderates the fluctuations. Regardless, management programs should recognize that predator-prey interactions are another natural factor affecting ungulates and one that will also change through time.

Published literature on predator-prey interactions is highly varied in its conclusions about the ability of predators to influence prey populations or *vice versa*. There have been almost as many different interpretations of predator-prey interactions as there have been studies reported. This is to be expected because of the variety of different ecosystems studied, the assortment of predator and prey species under study, and the different management actions carried out. Additional difficulties arise out of the short-term duration of many studies compared to longer-term habitat changes, measurement of insensitive variables, poorly designed monitoring protocols, or too many simultaneous activities confounding data measurements and interpretation. Correlation between two variables does not necessarily imply a cause and effect relationship (National Research Council 1997). Results may not be appropriately applied in a different setting. Predators and prey interact with one another within the context of a particular environment, given unique habitats, weather patterns, species diversity, animal densities, and management framework. Each published report must be interpreted within the context of the conditions prevailing at that time.

Some research has shown that predation may influence prey populations through changes in recruitment, adult mortality, or a combination of both (Gasaway et al. 1992, Ballard et al. 1997, Kunkel and Pletscher 1999, National Research Council 1997, Mackie et al. 1998, Ballard et al. 2001). Increased adult female mortality from other sources, such as hunter harvest or elevated overwinter mortality, may create conditions in which predation can limit ungulate populations or slow population growth (Kunkel and Pletscher 1999). However, some biologists reported that habitat and climate influenced deer populations more strongly than wolf predation (Wisconsin Department of Natural Resources 1999). In Minnesota, wolves do not appear to impact white-tailed deer populations, although there may be more localized effects (Mech and Nelson 2000, Minnesota Department of Natural Resources 2001). Recent findings in Yellowstone National Park indicate that winter severity has a dominating influence on wolf predation patterns on elk (Mech et al. 2001)

Generating an understanding of population dynamics and the interactions of predator and prey populations may seem straightforward. In reality, however, it is extremely difficult. Theoretical models describe potential interactions, but most have underlying assumptions, which may or may not be true. Considerable technical challenges must be overcome to accurately assess how or to what extent any single factor influences populations. Trying to accurately assess how two or more factors might be interacting with each other is even more challenging. Documenting predation as a major limiting factor of ungulate populations requires intensive radio telemetry, manipulation of both predator and prey populations, measurement of environmental conditions, a well designed monitoring program, and a sustained long-term effort. Interactions between populations and with their physical environments are also difficult to measure and interpret. Systems with multiple large carnivores, including wolves, are even more challenging.

This plan is not meant to provide a comprehensive summary of predator-prey interactions or wolf predation on ungulates. However, some of published scientific literature reviewed for this document, is listed as a partial bibliography in Appendix 4. Our understanding of how ungulates, wolves, other carnivores, and their physical environments interact in Montana will develop through time.

Adaptive Management

Ungulate management in Montana balances many factors, including population welfare, habitat condition, landowner tolerance, hunter opportunity, and the environmental factors influencing populations. Ungulate populations are managed in a comprehensive, ecological way. The precision with which MFWP manages ungulate populations is not intended to mitigate the impacts of single limiting factor such as wolf predation, lion predation, or other mortality sources in and of themselves. Instead, ungulate populations are managed by taking into consideration a variety of factors. Since elk, white-tailed deer, mule deer, and moose are the primary prey species of wolves in Montana, MFWP will consider wolf predation, along with the other factors, so that ungulate populations are managed in a comprehensive, ecological way.

MFWP adopted an adaptive management program for mule deer and informally applies adaptive management strategies to elk, white-tailed deer, and moose management. The goal of the MFWP deer program is to manage for the long-term welfare of Montana's deer resource and provide recreational opportunities that reflect the dynamic nature of deer populations (MFWP 2001). Management decisions are based on the welfare of the deer resource first and recreational opportunities are provided consistent with the dynamic nature of deer populations. The goal of the elk program is to maintain elk populations in a healthy and productive condition and to cooperate with public and private land managers in the management of elk habitat. MFWP strives to provide diverse recreational hunting opportunity, diverse viewing opportunities, and for general public enjoyment (MFWP 1992). Moose are managed by similar philosophies.

To proactively balance and integrate management of ungulate populations and the factors that influence them (including wolf predation), hunter harvest opportunity for ungulates may be adjusted. Hunter opportunity already changes in response to previous hunter success, hunter participation rates, or even access to private lands. Hunter opportunity also changes in response to environmental events that affect ungulate populations such as drought, severe winters, or poor recruitment. The presence of wolves within the yearlong range of a specific ungulate herd adds another factor for consideration among all environmental and human-related factors. MFWP acknowledges that changes in hunter opportunity may affect outfitters and non-resident hunters, in addition to resident hunters.

If a local prey population is significantly impacted by wolf predation in conjunction with other environmental factors, MFWP would consider reducing wolf pack size. If there are fewer than 15 wolf packs in the state, relocation to backcountry areas would be preferred. Suitable habitats within mixed land ownerships could also be sought out to fill in habitats between YNP and GNP, as socially acceptable. If there are more than 15 packs in the state, MFWP will reduce wolf pack size by regulated hunting or trapping. Wolf management actions would be paired with other corrective management actions to reduce ungulate mortality or enhance recruitment, such as reducing human hunter opportunity for ungulates. Concurrent management efforts for wolves and ungulates would continue until the prey population rebounded, recognizing that by the time prey populations begin to respond they may be influenced by a new set of environmental factors.

MFWP hosts meetings to gather input and comments from the public about proposed hunting regulations for ungulates and other managed species. MFWP will need to enhance the amount and type of information it provides regarding ungulate and carnivore population status and trends, as well as the possible implications of various management options. It will be important to allow the public to properly weigh the alternatives and provide meaningful feedback to MFWP about their preferences.

Monitoring

MFWP regularly surveys ungulate populations across a spectrum of their habitats, using a variety of techniques. Precise survey objectives vary by species, location, and season. Information gathered from live populations is also supplemented by harvest information gathered at hunter check stations or through the telephone harvest survey. Ungulate monitoring efforts will be enhanced where wolf packs are established.

Habitat

MFWP recognizes that ungulates and carnivores depend on a sustained, productive land base –both public and private lands. Habitat management prescriptions that enhance habitat for ungulates will ultimately benefit human hunters and wolves. Subject to landowner tolerance, MFWP will continue its efforts to enhance wildlife habitats on private lands. MFWP will also coordinate with public land grazing permittees and federal or state land management agencies to address conflicts between ungulates and domestic livestock.

Research

Predator - prey population dynamics are complex and knowledge about those relationships is incomplete. Long-term research will enhance understanding of those relationships and lead to more effective management. MFWP does not have the financial resources to initiate a long-term comprehensive ecological study of wolf-prey interactions independently. MFWP will participate and support research efforts by other collaborative partners, including universities, NPS, USFS, USFWS, WS, Idaho, Wyoming, and neighboring Canadian provinces. For example, the NPS began studying predator and prey populations in YNP before wolves were reintroduced. After reintroduction, ongoing research expanded to include wolves within YNP and now, outside YNP. MFWP is a partner in ongoing research into elk-wolf relationships in the Gallatin and Madison mountain ranges. These efforts will result in an increased ecological understanding of wolf-ungulate interactions. We will apply research findings from other areas as appropriate and address information needs specific to MFWP ungulate management programs as resources allow.

MFWP is also interested in evaluating specific management actions as to their efficacy and projected outcomes. This will be accomplished through a combination of the monitoring program within the adaptive management model and research efforts to evaluate management strategies or specific actions across all numbers of wolf packs and management settings.

Implementation

Table 2 summarizes a spectrum of MFWP management activities to maintain viable prey populations. Many activities fall within existing duties and responsibilities already carried out by MFWP, but some activities clearly add to existing responsibilities and workloads. For example, some wildlife biologists may have increased ungulate monitoring responsibilities or more frequent coordination with landowners. Most importantly, biologists and game

wardens will have increased public outreach responsibilities where wolves are established. Additional resources will be required to implement these new responsibilities because existing budget and personnel resources cannot absorb this expansion.

A draft budget is presented in Appendix 3. The budget outlines the personnel and financial resources necessary to fulfill the need for enhanced ungulate monitoring where wolf packs become established, for the programmatic integration of ungulate-carnivore management, and for the associated public outreach. It also reflects the comprehensive nature of designing and implementing a wolf management program. While this budget represents our best projection of the resources required, we cannot assess its accuracy until MFWP actually assumes management authority and begins implementation. Some components of managing prey populations to sustain a regulated hunting season for a wide variety of ungulates in a wide variety of circumstances and predation by wolves may not be fully captured by this draft budget. There may also be costs that could not be predicted at this time or were unforeseen. This budget will be refined in the future as MFWP gains more experience. MFWP will pursue all possible funding sources including, but not limited to public/private foundations, federal or state appropriations, and other private sources. Adequate funding will be necessary to fully implement the provisions of this Chapter.

WOLF – LIVESTOCK CONFLICTS

Introduction

Agricultural roots in Montana run deep. The earliest European settlers brought farming traditions and livestock with them. Montanans have been raising livestock for at least four generations. Agricultural heritage is woven through Montana's cultural fabric, just like our wildlife heritage. The rural characteristics of one affirm the other.

Farming and ranching in Montana maintains open space and helps people experience a "Big Sky" feeling. That open space is also habitat for a diversity of wildlife species. Maintaining the land base for agriculture and wildlife habitat is an increasing challenge, given broader trends inresource and agricultural economics, human population demographics, and development of the "New West" (Riebsame 1997). Sixty-nine percent of the human population growth in Montana from 1990 to 1997 was attributed to immigration (MFWP 1999). There are secondary benefits to a vigorous agricultural industry in Montana, including sustained economic activity in small rural communities, decreased rates of land conversion for subdivision and development, and maintenance of rural lifestyles.

Agricultural producers are usually interested in, proud of, and enjoy the wildlife associated with their properties, despite the occasional conflicts. The State of Montana acknowledges that wolves can create problems for some livestock producers. Financial losses may result directly from wolf depredation. Indirect costs may accumulate because of increased management activities or changes to agricultural operations. These financial hardships accrue to individual farmers and ranchers and may be significant to them. What makes wolf-livestock conflicts unique from other wildlife-livestock conflicts are the changes in the legal status of wolves. Historically, farmers and ranchers had the latitude to take care of problem wolves themselves. Since 1973, wolves have been legally protected. Regardless of historical events and how present circumstances came to be, the State of Montana acknowledges that tolerance for wolves on private property is fundamental to wolf recovery and maintenance. This is highlighted by the mixed land ownership patterns, geography, and wolf ecology.

Addressing wolf-livestock conflicts will entail two separate, but parallel elements. One element is the wolf management activities to minimize the potential for wolf-livestock conflicts and to resolve the conflicts where and when they develop. The management element primarily concerns the actions of state and federal agencies. Examples are providing technical assistance to producers, investigating complaints, and taking actions that reduce the probability that the offending wolf or wolves will be involved in another depredation incident. The management programs will be funded, administered, and implemented by the cooperating agencies. The second element addresses the economic losses when livestock are killed or injured by wolves or the proactive changes to husbandry practices that could be made if financial resources are available to help underwrite the changes. This element will be funded, administered, and implemented by a private party or otherwise independently of state and federal agencies.

Table 2. The spectrum of potential management activities to maintain viable populations of prey species Montana. The adaptive management model calls for selection of different management strategies as the number of wolf packs changes from less than 15 to 15 or greater. The different management settings (Public Lands and Mixed Land Ownerships) call for different strategies, depending on landownership patterns, social factors, land use patterns, biological constraints, and the physical attributes of the environment. Some management strategies may apply across all numbers of wolf packs or management settings, as indicated by the right arrows.

	WOLF PACK NUMBER			
	Less Than 15 Packs* ←		→ **15 Packs or Greater**	
	Public Lands *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*	**Public Lands** *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*
Montana Fish, Wildlife & Parks	Adaptive management →	→	→	→
	Enhanced ungulate monitoring where wolves are present →	→	Enhanced monitoring in selected areas →	→
	Research to improve ecological understanding of wolf-ungulate interactions →	→	Research to evaluate specific management actions →	→
Conservation and Management Strategies for Prey Species	Habitat enhancement projects	Habitat enhancement projects with cooperating landowners	Habitat enhancement projects	Habitat enhancement projects with cooperating landowners
	Adjust hunter opportunity to enhance prey populations	Adjust hunter opportunity to enhance prey subject to landowner tolerance	Adjust hunter opportunity to meet prey population objectives	Adjust hunter opportunity subject to landowner tolerance
	Integrate ungulate and carnivore management →	→	→	→
	Public outreach to inform and to address specific needs; Emphasize landowner relations →	→	→	→

* Montana shares a legal requirement with the states of Idaho and Wyoming to maintain a minimum total of 30 breeding pairs in the region. Since not all packs successfully breed and have pups every year, Montana will maintain at least 14-17 packs statewide to insure achievement of a minimum number of 10 breeding pairs with at least two pups on December 31.

The two elements, management and compensation, are funded, administered, and implemented separately and independently of one another -- but parallel one another, united in the goal of maintaining a viable wolf population and addressing wolf-livestock conflicts. The common goal links the two elements together and will foster collaboration among all parties. However, the decision-making process for each element could be independent from the other. For example, decisions about compensation could be made independently from how the cooperating agencies address problem wolves. Both elements are ultimately required, but the details and specifics about the nature of the relationship between agency management actions and compensation and how a compensation program could be designed and administered will be discussed later in this chapter.

It is Montana's intent to minimize the potential for wolf-livestock conflicts by proactively working with individual producers who could be disproportionately affected by wolf depredation. Upon delisting, MFWP will share responsibility with MDOL in managing wolf-livestock conflicts because Montana statutes assign responsibility to both agencies to manage wildlife causing damage to livestock. Even though Montana statutes will designate the gray wolf "in need of management" as a resident, native species overseen by MFWP, the wolf's ability to depredate on livestock and its unique historical relationship to agriculture also warrant the shared responsibility. MDOL and MFWP will work together, along with WS, to address and resolve wolf-livestock conflicts through a Memorandum of Understanding (MOU). Oversight is by the MFWP Commission and the Montana Board of Livestock. As conflicts arise under the state management program, resolution will be no less important or forthcoming. The framework for addressing wolf-livestock conflicts by the various agencies, livestock producers, and other citizens is described below.

Livestock Depredation

WS is a cooperating partner in the federal wolf recovery program with USFWS and has worked alongside the USFWS in investigating, documenting, and resolving wolf-livestock conflicts. WS agents gained significant experience with wolves in Montana and developed positive working relationships within the agricultural community. WS agents have investigated depredation complaints, captured wolves for research and monitoring purposes, provided technical assistance to producers, developed and tested non-lethal methods of depredation control, and removed problem wolves.

To date, almost all depredation incidents investigated by WS within Montana occurred on private land, whereas over 80% of depredations in Idaho and about 50% of depredations in Wyoming were on public grazing allotments (Meier in press). As wolf numbers and distribution increase in Montana, depredations may also occur on public grazing allotments or in remote backcountry settings. Between 300,000 and 400,000 sheep and cattle graze summer pasture on public lands in Montana (Bangs and Shivik 2001). It is not necessarily a foregone conclusion that wolves will automatically depredate on livestock, but wolf packs that regularly encounter livestock will depredate sporadically (Bangs and Shivik 2001). For example, the Ninemile pack in northwestern Montana regularly encounters livestock, but only depredated in three out of 11 years. But other packs attacked livestock not long after establishing a territory. Overall, livestock losses appear related to the availability of wild prey, increasing pack size, and the learned behavior of individual wolves. Research in a remote, mountainous allotment in central Idaho suggested that wolves tested and hunted cattle like wild prey, attacking the most vulnerable animals. Wolves killed calves that were the lowest weight, less guarded by people, nearest to an active wolf den, and in the heaviest forest cover (Oakleaf *in* Bangs and Shivik 2001).

In the northern Rockies, wolf depredation problems are more significant for sheep than cattle, which was also true historically. From 1987 to 2000, wolves accounted for the known loss of 148 cattle, 356 sheep, and 37 dogs in the states of Idaho, Montana, and Wyoming combined (USFWS et al. 2001). Between 1995 (the first year wolves were released into YNP and central ID) and 2000, an average of 21 cattle, 57 sheep, and 6 dogs were confirmed as wolf depredation per year within the three states combined (USFWS et al. 2001). Additional livestock losses may have been due to wolves, but these were not confirmed. Lack of evidence or the presence of conflicting or inconclusive evidence is problematic. Total carcass consumption by wolves is more likely than for other predators. Once abandoned, wolf kills are readily scavenged by other species. Appendix 5 summarizes confirmed wolf depredation data for the three recovery areas from 1987-2000. No estimate is available for unverified livestock losses that may have been due to wolves.

Wolves cause a small number of the total livestock losses in Montana compared to other sources of livestock mortality. Most sheep losses in Montana during 1999 were due to depredation by coyotes, disease, weather, and lambing problems. Most cattle losses in 1995 (most recent data available) were due to disease, calving, and, weather (Meier in press). Appendix 6 itemizes sheep and cattle losses by cause in Montana, as reported by the USDA Agricultural Statistics Service, Montana Field Office.

Nevertheless, wolf losses may be disproportionate to one or a few livestock producers because of where a wolf pack territory is established relative to livestock distribution, type of stock, and/or grazing practices such as turnout dates. Producers sometimes report missing livestock as suspected wolf depredation, but the loss cannot be confirmed. Sometimes a carcass is not found. In other instances, scavengers may have destroyed the evidence. Or, the evidence may be inconclusive because two or more carnivore species capable of killing livestock visited the site. In some circumstances, confirmed livestock losses may be a fraction of the total losses (Oakleaf *in* Bangs and Shivik 2001). In addition to livestock mortalities, producers have reported injured and stressed livestock, reduced weight gains, decreased pregnancy rates, and other complications when wolves are present. Issues such as unconfirmed losses, best management practices, or indirect effects on livestock productivity because of wolves warrant additional research. While MFWP is interested in this issue and would participate as a collaborative partner, it is unlikely that MFWP will be a major source of funding for such research.

Wildlife Services

WS, while not a resource management agency per se, is the federal entity routinely called upon by state and federal agencies as well as the private sector to provide operational and technical assistance to control damage caused by wildlife (Animal Damage Control 1994). WS is a work unit of the Animal and Plant Health Inspection Service of the U.S. Department of Agriculture. Through a partnership between the USDA and state agencies or the private sector, WS engages in a wide range of damage management activities, including research, consultation, control of problem animals, technical assistance, and public outreach. Respondents in a recent national survey affirmed that society has a need and a right to control the damage caused by wildlife and that state and federal governments should play a role in meeting that need (Reiter et al. 1999).

Within Montana, WS is currently a signatory to an MOU with MDOL and MFWP to investigate depredations and conduct predator control for damage caused by wildlife other than wolves. Upon delisting, an MOU between MFWP and WS will be developed under which WS would also assist with wolf-livestock conflicts. The MOU will guide coordination and management activities among the three entities. MFWP, in cooperation with MDOL, will contract WS to respond to landowner or livestock producer wolf depredation complaints, to conduct field investigations, and to carry out management actions. WS will bring their expertise to the situation and resolve the conflict. WS will also make recommendations about the resolution of specific conflicts as well as ways of improving agency effectiveness and overall conflict resolution procedures. MFWP has the responsibility to provide guidelines to WS for capture operations and procedures and to identify the appropriate management actions – given the situation details and wolf population status. MFWP will also provide guidelines for reporting of investigative findings, management activities, and outcomes. MFWP has the ultimate responsibility for determining the disposition of wolves and will be guided by the strategies outlined in this plan. MFWP will also coordinate with other state or federal agencies as appropriate.

The MOU will also be a formal recognition and extension of the ongoing cooperation already taking place at the field level between WS agents and MFWP personnel in resolving wildlife damage caused by species other than wolves. In many cases, that cooperation proactively addresses conflicts through public outreach and technical assistance. The result is less damage to private property and the lethal removal of fewer problem animals. Examples include the MFWP conflict management specialists working on the East Front of the Rockies, the Greater Yellowstone Area, and northwest Montana. This cooperative spirit is already established and will be expanded upon for resolution of wolf conflicts.

Livestock producers should report any suspected wolf depredations (injuries or death) or the disruption of livestock or guarding animals to WS directly, as is the case for other wildlife species such as mountain lions. Any evidence at the scene should be protected from disturbance. WS will also investigate incidents involving domestic pets or dogs, guarding animals such as llamas, and alternative livestock. A rapid agency field response is imperative so that evidence may be examined as soon as possible after the incident. WS agents complete an investigative report form

summarizing the type and extent of damage, physical evidence, and a description of the site. This report is ultimately filed with MFWP. MFWP will establish a database to tabulate, summarize, and assess trends in wolf-livestock conflicts.

Based on the results of a field investigation, WS will determine if a wolf (or wolves) was involved in the incident and whether any livestock deaths or injuries could be confirmed as wolf-caused. If the investigating WS agent *confirms* that a wolf or wolves were responsible, subsequent management actions will be guided by the specific recommendations of the investigator, the provisions of this plan and by the multi-agency MOU. WS will be directed to take an incremental approach to address wolf depredations, guided by wolf numbers, depredation history, and the location of the incident. When wolf numbers are low and incidents take place on remote public lands, WS would use more conservative management tools. WS could select progressively more liberal methods as wolf numbers increase and for incidents on private lands. Conflict history of the pack, attributes of the pack (e.g. size or reproductive status), or the physical setting will all be considered before a management response is selected. Specific actions range from catch and release on site, to harassment on site, to relocation or lethal removal. Management actions will be directed at individual problem wolves to the extent that they can be identified and clearly implicated. Non-selective methods such as poison would not be used. If relocation is the preferred management action, backcountry areas or remote public lands are intended release sites, with concurrence from the land management agency. Mixed land ownerships may be selected, as socially acceptable. When wolves are killed by WS, their carcasses will be processed as described in the Wolf Conservation and Management Chapter.

In a proactive manner, WS and MFWP will also work cooperatively with livestock producers and non-governmental organizations to help minimize the potential of wolf-livestock conflicts developing in the first place. Technical assistance may take the form of guidance on carcass disposal, extra fencing, deploying scare devices, testing of developmental non-lethal control methods, or loaning of radio telemetry receivers so that landowners can monitor wolves in the vicinity of their livestock. In fact, two thirds of respondents in a recent national survey indicated that a combination of government agencies along with either the private sector and/or the injured party should share the responsibility in managing wildlife damage (Reiter et al. 1999). This type of collaboration is called for in this plan, with the parallel elements of management and compensation.

Livestock Producers

MFWP commends the patience of livestock producers and their willingness to provide access to their properties for representatives of WS, USFWS, and non-governmental organizations to address wolf-livestock conflicts while the wolves are federally protected. Indeed, this type of public-private cooperation provides a solid foundation from which the State of Montana will assume management responsibilities.

Livestock producers acknowledge a sense of responsibility for the welfare of the animals under their care. As a result, producers take many initiatives to help safeguard their livestock from depredation by carnivores, as an everyday practice. Examples include the use of guarding animals, fencing or otherwise securing animals at night, or hiring extra people to check on remote livestock. Government and private organizations should be encouraged to assist livestock producers and landowners in designing, implementing, or cost-sharing these proactive husbandry practices.

With technical assistance from WS, a producer may alter husbandry or management practices such as carcass disposal or otherwise secure livestock or sources of conflict. A recent evaluation of wolf depredations in Minnesota did not isolate any clear-cut attributes or management practices predisposing certain cattle operations to wolf depredation (Mech et al. 2000). But research in Kansas (coyotes and sheep) and Italy (wolves and sheep) did identify husbandry practices as a contributing factor in canid-sheep depredations (Robel et al. 1981, Ciucci and Boitani 1998). In the northern Rockies, field experiences of WS and USFWS personnel have shown that exposed carrion can attract wolves to areas where livestock are present, thereby increasing the encounter rate between wolves and livestock, which may ultimately lead to a depredation incident (Bangs and Shivik 2001). Additionally, sick, wounded, or small livestock (calves or sheep), seemed particularly vulnerable, especially in remote areas away from buildings and people. The abundance of natural prey, relative vulnerability of livestock, and nutritional demands of the wolf pack also appeared to affect how often wolves attempted to attack livestock (Bangs and Shivik 2001).

Individual livestock producers should be rewarded for taking voluntary measures to reduce the potential for wolf-livestock conflict. Examples include reducing conflict availability by altering turnout dates, type of livestock, or the timing of breeding/calving cycles. If problems are chronic, a livestock producer would have the option to move or receive payment from a private organization for retiring a public grazing allotment, with concurrence from the land management agency. Federal land management agencies do not have administrative or budgetary procedures to pay a producer to retire an allotment. Such funds must be secured from other sources. However, the federal land management agencies do have administrative flexibility to address chronic wolf-livestock conflicts by working with individual producers or grazing cooperatives to modify grazing practices to the mutual agreement and benefit of all interests.

Producers should also be rewarded for their willingness to cooperate in experimental protocols testing non-lethal management tools, such as scaring devices or noise-makers. Because wolves learn quickly and may habituate to certain management tools, no single non-lethal technique will work in all situations or for extended periods of time. The National Wildlife Research Center (the research arm of WS), in conjunction with other partners, has been actively developing and field-testing methods to discourage wolves from approaching livestock (Bangs and Shivik 2001). This work will continue in the future.

Despite our collective attempts to minimize the potential for depredation, livestock depredation will still occur. Livestock producers should have a quick and efficient means available to address wolf depredation problems, particularly if the incident occurs on private property. There will be a positive relationship between wolf numbers and landowner flexibility to address wolf depredations. As wolf numbers increase, landowner flexibility will increase proportionately.

Less than 15 Wolf Packs -- Landowners or their agents may non-lethally harass a wolf or wolves without a permit if wolves are disrupting livestock on public or private land. The intent is to discourage wolf activity in close proximity to livestock, before a depredation actually takes place and more intensive management actions become necessary. If repeated and persistent non-lethal harassment does not discourage wolves from chasing, testing, or otherwise disrupting livestock, the producer may contact MFWP to receive a special permit that grants permission to kill wildlife under certain circumstances and according to certain provisions. These are also called "kill permits." Montana statutes assign authority to MFWP for providing special kill permits to landowners. Administration and follow up is also a responsibility of MFWP. Permit holders will be held accountable for adhering to the terms of the permit. Existing statutes prohibit all citizens (including livestock producers) from taking legally classified wildlife outside a MFWP Commission-approved season, the provisions of a special kill permit, or in defense of life/property. Examples of some legally classified wildlife include deer, elk, mountain lions, upland birds, or wolves. Special kill permits would only be valid on private land and would be subject to other restrictions mutually agreed on by both parties. MFWP will issue fewer kill permits when wolf numbers are low, out of concern for overall wolf population status. If a livestock producer kills a wolf under the special kill permit, he/she should not move or otherwise disturb the carcass. After securing the scene, producers should then report the incident to MFWP, as soon as possible, but within 72 hours. Upon investigation, the entire carcass must be turned in to MFWP. Livestock producers will be held accountable for wolves in the same manner as for other legally classified species killed under a special permit.

Producers or their agents may also non-lethally harass wolves that disrupt livestock on public lands. MFWP will not issue special kill permits to livestock producers to remove wolves on public lands when wolf numbers are low. If non-lethal harassment does not discourage wolf activity around livestock on public lands, the producer or agent should contact WS for guidance and appropriate agency action.

If a depredation does occur on public or private lands, the producer should secure the scene and report the incident to WS, as they presently do for other predator-related livestock losses. Upon a field investigation, WS may consult with MFWP or initiate non-lethal or lethal control actions, as appropriate and according to an MOU between MFWP, MDOL, and WS.

Upon delisting, provisions of SB163 take effect. Producers (or their agents) can kill a wolf (without a special kill permit from MFWP) if the wolf is "attacking, killing, or threatening to kill" livestock, regardless of whether the incident takes place on public or private lands. This is consistent with the intent of allowing private citizens to protect persons or livestock from imminent danger caused by wildlife (Montana Statute 87-3-130). If a livestock producer kills a wolf under the defense of property provisions of SB163, he/she should not move or otherwise

disturb the carcass. After securing the scene, livestock producers should then report the incident to MFWP soon as possible, but within 72 hours. Upon investigation, the entire carcass must be returned to MFWP. Montana statutes assign MFWP the authority and responsibilities related to the protection of life and property in the face of imminent danger or harm from wildlife.

15 Wolf Packs or Greater -- Landowners or their agents may non-lethally harass a wolf or wolves without a permit if wolves are disrupting livestock on public or private land. The intent is to discourage wolf activity in close proximity to livestock, before a depredation actually takes place and more intensive management actions become necessary. If non-lethal harassment does not discourage wolves from chasing, testing, or otherwise disrupting livestock, the producer may contact MFWP to receive a special kill permit, valid for public and private lands, in accordance with other terms mutually agreed to by both parties. Concurrence by the administering land management agency may be required prior to lethal control activities. MFWP will be more liberal in the number of special kill permits granted as wolf numbers increase and for depredations in mixed land ownership patterns.

If a livestock producer kills a wolf under a special kill permit, he/she should not move or otherwise disturb the carcass. After securing the scene, producers should then report the incident to MFWP as soon as possible, but within 72 hours. Upon investigation, the entire carcass must be returned to MFWP. Livestock producers will be held accountable for wolves in the same manner as for other legally classified animals killed under permit.

If a depredation does occur on public or private lands, the producer should secure the scene and report the incident to WS, as they presently do for other predator-related livestock losses. Upon a field investigation, WS may consult with MFWP or initiate non-lethal or lethal control, as appropriate and according to a MOU between MFWP, MDOL, and WS.

In lieu of a federal or state response, a designated trapper or a licensed sportsperson may be authorized to lethally remove problem wolves on public or private lands when the number of packs is 15 or greater. Taking of problem wolves by the public would be subject to licensing requirements and other regulations approved by the MFWP Commission that govern the regulated hunting or trapping of wolves. A licensed landowner, livestock producer, or their agent may also kill a wolf, without a special kill permit, by adhering to the regulations for public harvest approved by the MFWP Commission.

Upon delisting, provisions of SB163 take effect. Producers (or their agents) will be able to kill a wolf (without a special kill permit) if the wolf is "attacking, killing, or threatening to kill" livestock, regardless of whether the incident takes place on public or private lands. This is consistent with the intent of allowing private citizens to take wildlife to protect persons or livestock (Montana Statute 87-3-130). If a livestock producer kills a wolf under the defense of property provisions of SB163, he/she should not move or otherwise disturb the carcass. After securing the scene, livestock producers should then report the incident to MFWP as soon as possible, but within 72 hours. Upon investigation, the entire carcass must be turned in. Montana statutes assign MFWP the authority and responsibilities related to the protection of life and property in the face of imminent danger or harm from wildlife.

Recreationists, Hunters, Outfitters etc.

Citizens in backcountry areas should rely on non-lethal harassment unless wolves directly threaten a person, pet, or livestock. If a wolf is killed in defense of life or property, citizens should protect the scene from disturbance and report it to MFWP as soon as possible, but within 72 hours. MFWP or WS will conduct a field investigation. If an incident takes place in mixed land ownerships, recreationists should also rely on non-lethal techniques. The incident should be reported to MFWP. If a wolf is killed in defense of life or property, citizens should not disturb the carcass, but protect the scene and report the incident to MFWP as soon as possible, but within 72 hours. Anytime a wolf is killed in defense of life or property, the entire carcass must be returned to MFWP.

Compensation

Montana recognizes that wolf population recovery and persistence will result in the loss of personal property or income due to wolf activity and depredation. Some producers are exposed to potential financial liabilities that did not exist prior to wolves. Many livestock producers operate on a narrow financial margin and even a single depredation event could have significant economic consequences. There are additional costs associated with

safeguarding livestock against wolf depredation, such as extra people to supervise livestock, extra guarding animals, increased travel to check livestock more frequently, and veterinary expenses if livestock are injured. Some producers report decreased pregnancy rates in cows harassed by wolves. Sometimes producers report retrieving fewer head of livestock at the end of the grazing season, but cannot find evidence of a carcass. Even with a carcass, cause of death may still be unknown. Nonetheless, what remains clear is that livestock producers must reconsider certain management practices in the presence of wolves to proactively minimize the potential for wolf-livestock conflict.

Compensation programs typically are established for problems that developed recently, were exacerbated by governmental actions, or were caused by highly valued species (Wagner et al. 1997). Wolf presence in the northern Rockies touches on all three scenarios. Defenders of Wildlife, a non-profit wildlife advocacy organization, recognized the disparity of the costs and benefits for wolf restoration between the ranching community and those advocating wolf recovery. Their goal was to shift the economic liability away from ranchers and towards wolf advocates through a compensation program that reimbursed ranchers for losses from wolf depredation (Fischer 1989). The Wolf Compensation Fund was established in 1987 and paid a total of $150,590 to ranchers in the tri-state area between 1987 and February 2001 (Defenders of Wildlife 2001). In some cases, veterinary bills for livestock injured by wolves were reimbursed. Funds from the Wolf Compensation Fund have also been used to purchase livestock feed, lease supplemental pasture, purchase additional guarding animals or fencing materials, and to cost-share other modifications to husbandry practices to proactively minimize the potential for future depredations. Compensation addresses one of the major concerns about wolf restoration and has helped to increase the tolerance for wolves. See Appendix 7 for additional data on compensation payments made by Defenders of Wildlife between 1987 and April 2001.

The State of Montana believes that compensation is critical to maintaining tolerance for wolves by livestock producers who are adversely affected by financial losses due to wolves. At this time, it is unclear whether Defenders of Wildlife will continue to offer compensation for losses when wolves transfer to state management jurisdiction. The State of Montana intends to find or create an entity to administer a compensation program if Defenders of Wildlife rescinds eligibility for Montana ranchers upon delisting. The entity or non-governmental organization would be independent of MFWP and MDOL to retain impartiality. Negotiations would take place directly with the producer. This approach is modeled after the existing arrangement with wolves under federal management. Presently, the Defenders of Wildlife compensation program representative negotiates directly and confidentially with the individual producer to determine compensation. This is independent from the USFWS management programs and decision-making about what happens to the offending animals. The USFWS supports the concept of compensation and believes that the existence of a private program has benefited wolf recovery (Bangs per. comm.)

The existing model has emerged somewhat through trial and error and the circumstances of individual wolf-livestock conflicts in the northern Rockies. It has also evolved since its inception. Wildlife damage compensation programs have great intuitive and theoretical appeal, and may be important tools in promoting wildlife conservation. Compensation programs may also have unintended consequences with long range implications. They are also costly, but there may be less costly ways of achieving the same ends.

A scientific evaluation of state government predator compensation programs in Idaho and Wyoming and of the Defenders of Wildlife programs in Montana, Idaho, and Wyoming for grizzly bears and wolves has recently gotten underway. A partnership among private citizens, non-governmental organizations, state and federal agencies, and academic institutions has formed. The objectives are to evaluate the effectiveness of these compensation programs, examine the role compensation programs play in predator conservation efforts within agricultural settings, determine how compensation programs can be structured and administered to meet the needs of livestock producers, and assess the impact that compensation programs have on public opinions and attitudes towards predator conservation and management. This effort is known as the Predator Compensation Research Study. A diversity of interests is represented on the advisory committee, including representatives of the funding organizations and livestock producers. The findings of this research effort will have important implications for the future wolf compensation program in Montana. A final report is anticipated in spring, 2003. With new information in hand, MFWP will be in a better position to work with Defenders of Wildlife or some other entity to help design a compensation program based on the cooperative input from livestock producers, non-governmental organizations, and other interested parties.

Funding

Compensation has been an important companion to federal agency wolf management activities with respect to wolf-livestock conflicts. Under state management authority, similar needs will exist. Montana would like to maintain and enhance the benefits of the compensation program. But the state is prohibited from financially compensating citizens for damages caused by wildlife. We do not foresee any changes in this regard. Instead, MFWP and MDOL offer technical assistance, consult with WS, or use other management tools to address damage caused by wildlife. Since compensation payments cannot be made from MFWP funds or matching federal monies intended for wildlife or habitat programs, securing alternative funding is crucial to program success. Nonetheless, MFWP is exploring alternative funding sources, including: a surcharge to national parks entrance fees to be earmarked for wolf conservation and management activities in the tri-state area, a livestock insurance program through USDA, a national wolf management trust fund, and private donations or non-governmental organizational support.

MFWP is also looking into the feasibility of a livestock insurance program for producers, which is modeled after the crop insurance program. Producers would pay a subsidized premium to insure livestock for losses due to wolves. Loss payments would come from premiums collected over all producers and from private donations. WS would verify losses.

Despite the present uncertainty of how a compensation program would be designed and administered, funding this element of the overall wolf management program is essential to its successful implementation. The State of Montana will pursue all possible funding sources including, but not limited to public/private foundations, federal or state appropriations, and other private sources. Securing adequate funding for compensation is of equal priority as securing funding to implement the state and federal agency management activities. A later chapter also discusses funding possibilities for a compensation program.

Procedures

Although many of the details about funding, administration, or relationship to management actions by agencies or livestock producers are still unknown at this time, WS will investigate cases of suspected wolf depredation, just as they do for other wildlife species causing damage to livestock. If WS *confirms* that a wolf was responsible, the producer would be eligible for compensation, regardless of whether the incident occurred on public or private lands. If the field investigation concludes that wolf depredation was *probable,* the producer would also be eligible for compensation. Additional research is required to examine the question of undocumented livestock losses.

Producers would be compensated for livestock losses at fair market value at the time of death and at fall value for young of the year. Eligible livestock include cattle, calves, hogs, pigs, horses, mules, sheep, lambs, goats, and guarding animals. The Council recommended that losses of household domestic pets should not be compensated, but acknowledged the significant emotional loss. The Council also recommended that losses at alternative livestock (game farm) facilities should not be compensated. Wolf ingress into a poorly secured facility is the responsibility of the operator. The fact that many alternative livestock facilities confine native prey species, which may naturally attract wolf activity, further precludes payments for these losses. In the same vein, recreationists take responsibility for their pets when recreating in occupied wolf habitat.

Implementation

Table 3 summarizes a spectrum of state, federal, or private management strategies to minimize the potential for wolf-livestock conflicts and to resolve conflicts where and when they develop. Many activities fall within existing duties and responsibilities already carried out by WS or MFWP, but some activities clearly add to existing responsibilities and/or workloads. For example, WS may respond to increasing numbers of wolf-livestock complaints as wolf numbers and distribution expand. WS has been actively involved during the federal wolf recovery phase. From 1995-2000, WS spent an average of $90,086 per year for wolf-related work, including half of the yearly expenses of a Wolf Management Specialist position (L. Handegard, pers. comm.). Montana will also contract with WS for assistance with wolf depredation activities. WS will assist with wolf capture, control actions, research and development of non-lethal methods, and also technical assistance to producers. Expenditures for wolf management by WS could increase in the future as wolves increase in number and distribution. Experience in Minnesota indicates that as wolf numbers and distribution increase into agricultural areas, wolf-livestock conflict

may increase (Mech 1998b). MFWP will seek additional funding and will also support WS in their effort to obtain additional funding.

MFWP will also experience increased responsibilities and workloads associated with wolf-livestock conflicts. The MFWP Enforcement Division will now provide technical assistance to landowners and/or assist WS in resolving wolf-livestock complaints. MFWP may also experience increased workloads associated with administration of any special kill permits issued directly to livestock producers or investigations of wolves killed while attacking livestock. The MFWP Wildlife Laboratory will experience an increased workload associated with processing

Table 3. The spectrum of potential management activities to minimize the potential for wolf-livestock conflicts and the management activities to resolve conflicts where and when they develop. The adaptive management model calls for selection of different management strategies as the number of wolf packs changes from less than 15 to 15 or greater. The different management settings (Public Lands and Mixed Land Ownerships) call for different strategies, depending on landownership patterns, social factors, land use patterns, biological constraints, and the physical attributes of the environment. Some management strategies may apply across all numbers of wolf packs or management settings, as indicated by the right arrows.

	WOLF PACK NUMBER			
	Less Than 15 Packs* ←		→ **15 Packs or Greater**	
	Public Lands *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*	**Public Lands** *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*
Livestock Producers	Lethal take in defense of life/property →	→	→	→
	Non-lethal harassment →	→	→	→
	WS response; technical assistance from WS & MFWP →	→	→	→
	No MFWP special kill permit for public lands	MFWP kill permit for private lands only; conservative number issued	Limited number of MFWP kill permits for public lands	MFWP kill permits for private or public lands; number issued more liberal
	No open season for designated trapper →	→	Designated trapper or licensed hunter/trapper during open season	Designated trapper or licensed hunter/trapper during open season
Citizens (outfitters, hunters, recreationists)	Lethal take in defense of life/property →	→	→	→
	Non-lethal harassment →	→	→	→

Table 3. Continued.

	WOLF PACK NUMBER Less Than 15 Packs* ← | → 15 Packs or Greater			
	Public Lands ***(backcountry areas & near National Parks)***	**Mixed Land Ownerships** ***(interspersed public and private lands; interspersed agriculture)***	**Public Lands** ***(backcountry areas & near National Parks)***	**Mixed Land Ownerships** ***(interspersed public and private lands; interspersed agriculture)***
Wildlife Services	Technical assistance to producers, cooperation with MFW	→	→	→
	Activities directed by Memorandum of Understanding with Montana Fish, Wildlife & Parks and Montana Department of Livestock	→	→	→
	Incremental approach, conservative	→	Incremental approach	Incremental approach, more liberal
Montana Fish, Wildlife & Parks	Technical assistance to producers, cooperation with Wildlife Services	→	→	→
	No special kill permits issued	Special kill permit administration and oversight; carcass retrieval	→	→
	Responsible for disposition of wolves involved in livestock conflicts	→	→	→
	Public outreach to inform and address specific needs	→	→	→
	No open hunt/trap season	→	Conservative hunt/trap season where depredation is chronic	Hunt/trap season which maintains wolf packs and minimizes potential for wolf-livestock conflict

Table 3. Continued.
* Montana shares a legal requirement with the states of Idaho and Wyoming to maintain a minimum total of 30 breeding pairs in the region. Since not all packs successfully breed and have pups every year, Montana will maintain at least 14-17 packs statewide to insure achievement of a minimum number of 10 breeding pairs with at least two pups on December 31.

wolf carcasses or filling educational requests. Additional resources will be required to implement these new responsibilities. Existing budget and personnel resources cannot absorb this expansion.

Table 4 summarizes the direction and guidelines for compensation of livestock losses due to wolf depredation. There are additional responsibilities and workloads associated with providing compensation to livestock producers, although it is not clear who or how a compensation program or livestock insurance program will be administered at this time. Results from the Compensation Research Study will help identify the best, most efficient and responsive ways to fulfill this aspect of the overall wolf management program.

The Compensation Research Study will address how well livestock producers think the Defenders of Wildlife compensation program meets their needs and ways in which the program could be improved. Livestock interests on the Montana Wolf Advisory Council identified the challenges associated with the issue of *unconfirmed* livestock losses – losses for which wolf predation could not be *confirmed* definitively because of decomposed remains, scavenging by other species, or near complete consumption. Presently, these are recorded as *unconfirmed* by WS agents, with additional information about the evidence and the circumstances noted on their report forms. Defenders of Wildlife uses this additional information along with other supplemental information to make a determination of *probable* loss due to wolves, strictly for the purposes of compensation. If information indicates a strong likelihood, Defenders of Wildlife, has reimbursed producers for *probable* losses due to wolves. Federal agency management actions have still been based on the WS determination of *confirmed/unconfirmed*. Whether Defenders of Wildlife would continue to reimburse producers for *probable* losses in the future, according to their own criteria and information provided from WS, is unknown at this time. Long-term solvency of any compensation fund could be in jeopardy if fund-raising does not keep pace with the amount paid out in claims.

If Defenders of Wildlife is not the primary source for compensation in the future under state management jurisdiction, the state would need to find or create an entity to administer a compensation program and provide guidelines for payment. Implementation of the Council's recommendation to compensate for *probable* losses could be somewhat problematic. Guidelines would need to clarify the circumstances and evidence required for payment of *probable* claims in the absence of a *probable* designation by WS. Addition of the *probable* category represents a new type of loss for the Montana-based WS investigative procedures and would need to be approved by WS. It would be challenging for both investigating WS agents and administrators of a compensation program to apply a consistent set of criteria for this determination because the circumstances and available evidence vary from one incident to another. Time elapsed since death, weather, or other factors unique to that incident all affect the evidence available and its interpretation. Selection of the *probable* category has to do with the degree of certainty on the part of the WS agent, based on less than conclusive evidence to confirm or not confirm a wolf or wolves as the cause of loss. While all investigators look for the same evidence, the interpretation may be less consistent when investigators must use their own professional judgment in the absence of clear evidence. MFWP would also find the decision-making process on the disposition of the wolf or wolves more difficult if there is less certainty about the cause of death or injury, especially in light of all the other means by which livestock die or are injured. Nonetheless, MFWP will explore the concept and utilize the findings of the Compensation Research Study to help guide the compensation elements of the wolf management program.

All parties share the responsibility of addressing the economic challenges of minimizing the potential for wolf-livestock conflicts and resolving conflicts where and when they develop. A draft budget is presented as Appendix 3.

The budget outlines the personnel and financial resources necessary to proactively minimize the potential for wolf-livestock conflict and resolve conflicts where and when they develop. MFWP and WS cooperatively fulfill these responsibilities, as described in this Chapter.

Table 4. Direction and guidelines for compensation of livestock losses due to wolf depredation in Montana. The adaptive management model calls for selection of different management strategies as the number of wolf packs changes from less than 15 to 15 or greater. The different management settings (Public Lands and Mixed Land Ownerships) call for different strategies, depending on landownership patterns, social factors, land use patterns, biological constraints, and the physical attributes of the environment. Some management strategies may apply across all numbers of wolf packs or management settings, as indicated by the right arrows.

	WOLF PACK NUMBER			
	Less Than 15 Packs* ← | →		**15 Packs or Greater**	
	Public Lands *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*	**Public Lands** *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*
Livestock Producers (cattle, calves, hogs, pigs, horses, mules, sheep, lambs, goats, guarding animals)	Incentives to reduce potential for conflict →	→	→	→
	Compensation and/or livestock insurance program for *confirmed* and *probable* wolf losses at fair market value →	→	→	→
	No compensation for pets, alternative livestock →	→	→	→
Funding	Private donations and/or special state or federal appropriations (no MFWP funds) →	→	→	→
Adminis-tration	Pending results of Compensation Research Study; Non-governmental organization independent of MFWP; Defenders of Wildlife uncertain; →	→	→	→

* Montana shares a legal requirement with the states of Idaho and Wyoming to maintain a minimum total of 30 breeding pairs in the region. Since not all packs successfully breed and have pups every year, Montana will maintain at least 14-17 packs statewide to insure achievement of a minimum number of 10 breeding pairs with at least two pups on December 31.

The budget truly reflects the comprehensive nature of designing and implementing a wolf management program that addresses wolf-livestock conflicts. While this budget represents our best projection of the resources required, we cannot assess its accuracy until MFWP actually assumes management authority and begins implementation . Some components of the wolf program may not be captured fully by this draft budget. There may also be costs that could not be predicted at this time or were unforeseen. This budget will be refined in the future as MFWP gains more experience. It may also be refined to reflect changes in costs associated with depredation management by WS. This

budget also estimates annual compensation payments. The estimate was derived from the 1997 payments by Defenders of Wildlife for losses within the State of Montana, extrapolated over a projected 20 packs. Actual payments in any given year may be higher or lower than the budgeted amount shown. It is important to capture what may represent the upper limit of claims paid for *confirmed* and *probable* losses in any single year. There may also be administrative costs associated with implementing a compensation program.

In summary, implementation of the management strategies and compensation program outlined in this Chapter will require enhanced or new sources of funding. Without adequate financial resources for both elements (management and compensation), implementation is not possible. All possible sources of funding including public/private foundations, federal or state appropriations, and other private sources will be sought.

WOLF – HUMAN CONFLICTS

Introduction

In recent years, MFWP has taken a proactive approach in helping people learn how to live and recreate in wildlife habitats. Other state and federal agencies have done the same. Increasing numbers of people are living within the urban-wildland interface where a potential for conflict with a wide variety of wildlife species exists. Outdoor recreation trends also place increasing numbers of people in wildlife habitats (Youmans 1999). Living and recreating in wildlife habitats has inherent risks. Through policy development, public outreach, and technical assistance to landowners and recreationists, MFWP is working towards mitigating those risks to the extent possible.

In accordance with Montana statutes, MFWP and the MFWP Commission are authorized and charged with the duties of protecting people and personal property from damage and depredation caused by wildlife. MFWP defines a public safety problem related to carnivores as: any situation where an MFWP employee reasonably determines that the continued presence poses a threat to human safety, an attack has resulted in the loss of livestock or personal pets, or that a human has been physically injured or killed.

Wolf-Human Encounters

Public safety is an important consideration because species such as the gray wolf, mountain lion, black or grizzly bear are capable of injuring or potentially killing a person. Even though wolves generally fear humans, there are instances where individual wolves lost their wariness of people (Mech 1998a, Route 1999). In Canada's Algonquin Provincial Park, four different wolves progressively lost their fear of humans, resulting in five separate incidents over the last 11 years. These four wolves, though previously non-aggressive, eventually bit humans. Two incidents of wolf aggression towards people were serious and required stitches. Each of the wolves was accustomed to humans and had been frequenting campgrounds, running off with backpacks, human food, and other camping items over a period of months. People interacted with these wolves at very close range until the wolf became too bold (Route 1999). Park managers removed the four wolves. Some wolves in Denali National Park in Alaska have grown increasingly tolerant of close proximity to humans in and around campsites, although no injuries have been reported (Boyd in press). One incident on Vargas Island, British Columbia in which a wolf bit a camper paralleled the incidents in Algonquin Provincial Park. Park managers removed two wolves that had been loitering near camping areas. One recent incident in Icy Bay near Anchorage, Alaska left a young boy with several stitches after a wolf bite. This wolf was also removed.

It appears that most wolf-human encounters were not precipitated by the wolf perceiving the human as prey because of how the wolves behaved, the presence of domestic dogs, or the sequence of events (Mech 1998a). This is in stark contrast to the case histories of mountain lion-human incidents in which it appears that mountain lions sometimes do perceive humans as prey (Deurbrouck and Miller 2001). Case studies of injurious bear-human incidents highlight surprise encounters, defense of cubs or food, and/or the bear perceiving the human as a threat to be neutralized. For wolves, a loss of fear seems to be a common thread running through all North American wolf incidents resulting in human injury (Mech 1998a). It appears that wolves can habituate to humans or human activities as readily as bears or mountain lions (Aune 1991, Boyd in press). Whether or not this degree of familiarity translates to a threat to human safety may hinge on prompt management response by the appropriate authorities. It appears that habituation in wolves may not require a consistent pattern of food conditioning as seems the case for bears. Wolves may

increase their tolerance for the close proximity of people through repeated, long-term social interaction with people and "being rewarded" in some fashion, whether food or otherwise. It seems that some period of time is required for a wolf to habituate to human proximity, although precisely how long may be a function of setting and vary from one individual wolf to another. MFWP would be as concerned about habituated wolves as we are about habituated bears and will attempt to discourage habituation for all wildlife species and carnivores in particular.

No wolf-caused human fatality has been documented in North America. All cases in which a human was injured occurred where wolves have shared the landscape with people for a long time. Most incidents occurred in park or preserve settings where wolves were legally protected, but individual wolves had become habituated. On the contrary, there are no reported incidents from areas where wolves have recently recolonized or been reintroduced in the northern Rockies or the upper Midwest. In contrast, mountain lions are responsible for ten human deaths and 48 nonfatal injuries in the U.S. and Canada from 1890-1990 (Beier 1991).

In Montana, hikers have unknowingly encountered an occupied den site and wolves barked. Other encounters occurred away from wolf den sites and ended when the wolf retreated, without injury to human or pet. One incident involved a hiker with two dogs and multiple wolves. Since the mid-1980's, the only two injuries to humans by wolves in Montana occurred when wolf researchers and managers handled unrestrained animals during live-capture operations. However, there have been 8 mountain lion-human incidents in Montana from 1990-1999 in which seven people were injured and a young boy was killed (MFWP unpubl. data). These were all encounters in which the human was not aware of the lion.

In Montana, wolves have injured and killed domestic pets, primarily dogs. Most incidents involved herding dogs associated with livestock operations. Other cases of dog depredations were hounds trailing mountain lion or bobcat scent. Hounds typically do not switch scent trails from felids to canids, but may encounter wolves while pursuing wild cats or at lion kills assumed by wolves. More hound dogs have been lost to mountain lions than wolves thus far in Montana. Claar et al. (1999) summarized current understanding and knowledge of hound dog-wolf interactions. Bangs and Shivik (2001) also noted wolves probably perceived hunting hounds and guarding/herding dogs as "trespassing" competitors rather than as prey because wolves did not feed on the domestic dogs.

Despite their wariness of people, wolves will still use natural habitats in close proximity to humans. This is particularly true in northwestern Montana where people build their homes in thick, forested habitats. Members of the Murphy Lake pack are occasionally seen within 100 yards of homes and in rare instances closer. While this pack is clearly accustomed to human activity within its home range, its members have shared the landscape with people without incident for 10 years. One pack just outside of YNP is often seen in open grassland terrain.

Because wolves live in social groups, people may see them more frequently than other large carnivores, although wolves are not necessarily any more dangerous. Mountain lions and bears are solitary, except for mothers with dependent young or during the breeding season. Wolves are much less secretive than mountain lions. Wolves feed and rest in open areas with good visibility, whereas lions tend to hide their kills and feed or rest in dense vegetative cover. Wolves will also travel across openings in forest cover or natural meadows in ways that mountain lions or bears do not. In addition, wolves use linear corridors such as roads, utility lines or railroad rights-of-way for traveling and scent marking. Because of the differences between the secretive stalking behavior of mountain lions and the broad, open searching behavior of wolves, people probably have a greater chance of a close encounter with a mountain lion than a wolf.

Another important consideration also stems from the fact that the natural order of existence for wolves in the wild is to belong to a pack. Pack membership has attendant functions such as establishment and maintenance of social hierarchies, patrolling and marking territory boundaries, pup-tending, hunting, bringing food back to pups, resting, or interacting with other wolves or other wildlife species. Wolves affiliated with a pack are usually actively engaged in one of these "purposes" and do not spend extended periods of time loitering in any one location – activity at den or rendezvous sites notwithstanding. Pack-affiliated wolves, when seen alone, will usually be seen sporadically because they are en route to someplace else for some particular reason. Even dispersing wolves will generally not loiter and will move through an area near people. This is in contrast to a situation in which a single wolf is seen repeatedly loitering in an area near people and does not appear to be affiliated with a pack. These individual wolves could gradually loose their fear of people, become food conditioned, or otherwise interact with people at

decreasingly safe distances. If this pattern is allowed to continue through time, the wolf may become a safety concern. This will become especially evident if the animal does not respond to hazing or harassment.

Management

MFWP intends to reduce the potential for wolf-human conflicts and minimize the risks of human injury due to wolf presence in the state. MFWP's approach to wolf-human interactions will model the policies for addressing mountain lion-human or bear-human conflicts. First and foremost is to discourage habituation and then respond to conflicts where and when they develop. MFWP, through its educational efforts and enforcement of existing statutes, discourages the public from artificially feeding wildlife or allowing wild animals access to human foods, garbage, pet food, livestock feed, or birdseed. Any artificial concentration of wild animals caused by supplemental feeding (e.g. deer or turkeys) may constitute a threat to public safety if carnivores are attracted to the supplemental food itself or the animals using the supplemental food. In addition, MFWP reminds people to keep a safe distance and that wild animals should be kept wild. While MFWP emphasizes the educational approach in working with the public to prevent wildlife habituation and maintain human safety, Montana statutes prohibit citizens from "purposely" providing supplemental feed in a manner that results in an artificial concentration of game animals that may potentially contribute to the transmission of disease or that constitutes a threat to public safety (MCA 87-3-130).

MFWP developed specific guidelines for addressing situations in which mountain lions or black or grizzly bears are a nuisance or threaten public safety. Management actions are carried out by various MFWP personnel, including biologists, game wardens, and conflict management specialists. Similar guidelines will be developed for wolves. If a wolf loiters near ranch buildings or rural residences, the potential threat to human safety will be evaluated, taking into account the setting, behavior of the animal, and the sequence of events. MFWP will require some degree of flexibility to be most responsive to public safety concerns. A wolf will be permitted to move through these areas, but length of stay and behavior will be important criteria for determining the appropriate management response. Less deference will be granted to a single loitering wolf found to have ongoing exposure to and association near people. Across the spectrum of wolf distribution and numbers, MFWP will take an incremental approach so that the management response matches the infraction. Potential actions include: increase local public outreach and education, closely monitoring the situation, marking the animal with a radio collar to track its movements, aversive or disruptive conditioning, harassment, relocation, or lethal removal. If relocation is selected, remote public lands would be preferred release sites. MFWP will also cooperate with other agencies and landowners in researching new techniques to resolve wolf-human conflicts. Suspicious, large-sized canids in these situations could be released captive wolves or wolf-dog hybrids. Large canids that appear wolf-like and demonstrate habituated behavior potentially threatening human safety will be lethally removed.

Montana citizens have the right to protect or defend themselves if threatened by wildlife. Mountain lions, black bears, and grizzly bears have all been legally killed for this reason. In the unlikely need for defense of human life during a wolf encounter, citizens may use any means, including lethal force, to address an imminent threat, regardless of wolf population status or whether the incident takes place on public or private land. Guarding and domestic dogs can also be defended using lethal means. Any wolves killed under these circumstances must be reported to MFWP as soon as possible, but within 72 hours. Citizens must also turn in the entire carcass. In the absence of a direct threat to life or property, citizens are encouraged to rely on non-lethal harassment to discourage wolf presence near their homes or person when recreating outdoors.

As wolf numbers and distribution increase in Montana, the public's concern about human safety could increase. Humans and wolves may encounter one another at close range in a variety of settings. MFWP will provide information to the general public about appropriate responses during wolf encounters (do's and don'ts) and how to minimize the potential for problems near homes and rural schools. This material will also include information about wolf behavior, body posture, tail position, vocalizations, etc. to help the public evaluate the situation, correctly interpret wolf behavior, and communicate the details accurately to agency personnel. An educational effort will also help the public understand the differences between wolves, mountain lions, and bears in terms of animal behaviors, appropriate human responses when threatened, and how to live and recreate outdoors in the presence of these large carnivores. See Appendix 8, Draft Public Information Plan for additional information on the public outreach efforts.

Although the primary management responsibility related to wildlife and human safety rests with MFWP, local law enforcement or other state of federal agency personnel may respond to a wolf-human incident if MFWP personnel are not available in a timely manner. This cooperation already takes place for other wildlife species. Regardless of the responding party, the public can be confident that response will be rapid and the conflict will be resolved in favor of public safety. Providing the public an effective and prompt response to wolf-human conflicts, whether through their own or agency management actions, will foster public support for wolves in Montana.

Implementation

Table 5 summarizes a spectrum of management activities to ensure public safety. While MFWP has always been charged with this responsibility, wolves represent a new category of wildlife for which the state assumes responsibility, upon delisting. Game wardens, conflict specialists, and some wildlife biologists will now respond to wolf-human incidents and any threats to public safety. Information specialists will now incorporate new materials into their public outreach efforts. Wolves have engaged the spirit, imagination, and emotions of people for a long time – whether fear or awe. Public outreach materials must address the public's perception of risk and fear of injury or death due to wolves and how to protect oneself during a close encounter. Public outreach materials must also guide the public towards maintaining a healthy respect for wildlife and keeping it wild, an ethical approach to viewing wolves, and the hazards of habituation. Table 5 also summarizes actions that citizens may take during a threatening encounter with wolves.

Many activities fall within existing duties and responsibilities already carried out by MFWP, but some activities clearly add to existing responsibilities and workloads. Additional resources will be required to implement these new responsibilities because existing budget and personnel resources cannot absorb the expansion. A draft budget is presented as Appendix 3. The budget outlines the personnel and financial resources necessary to prevent wolf-human conflicts and minimize the risks of human injury due to wolf presence. Public safety is a responsibility that MFWP takes very seriously and it is an agency function that crosses many Divisions. The Conservation Education Division, the Wildlife Division, and the Enforcement Division all have a role to play, as is outlined in this Chapter. As such, the budget truly reflects the comprehensive nature of designing and implementing a wolf management program that also assures human safety. While this budget represents our best projection of the resources required, we cannot assess its accuracy until MFWP actually assumes management authority and begins implementation. Some components of the wolf program may not be captured fully by this draft budget. There may also be costs that could not be predicted at this time or were unforeseen. This budget will be refined in the future as MFWP gains more experience. MFWP will pursue all possible funding sources including, but not limited to public/private foundations, federal or state appropriations, and other private sources. Adequate funding will be necessary to fully implement the provisions to assure human safety outlined in this Chapter.

INFORMATION AND EDUCATION PROGRAM

The primary determinant of the long-term status of gray wolf populations will be human attitudes towards wolves (USFWS 2000). But attitudes, beliefs, and concerns about wolves are highly variable. Underlying various attitudes are human safety concerns, perceptions of risk, the symbolic significance of wolves, economic impacts on livestock producers, convictions that wolves should not be killed, Native American traditions, perceptions that wolves compete with human hunters for ungulates, beliefs that wolves do not have a place in the 21st century – and many others. Attitudes have changed over time and acceptance for wolves has increased among some segments of the public. Attitudes will continue to evolve.

Regardless of personal beliefs and attitudes, an active, informed public is critical to the protection of Montana's wildlife resources. This is particularly true for the gray wolf. The history of wolves in Montana has as much to do with the relationship between wolves and people as it does with the ecology of the species. The same will be true of the wolf's future.

Table 5. Spectrum of management and public outreach activities to ensure public safety in Montana. The adaptive management model calls for selection of different management strategies as the number of wolf packs changes from less than 15 to 15 or greater. The different management settings (Public Lands and Mixed Land Ownerships) call for different strategies, depending on landownership patterns, social factors, land use patterns, biological constraints, and the physical attributes of the environment. Some management strategies may apply across all numbers of wolf packs or management settings, as indicated by the right arrows.

	WOLF PACK NUMBER			
	Less Than 15 Packs* ←		→ **15 Packs or Greater**	
	Public Lands *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*	**Public Lands** *(backcountry areas & near National Parks)*	**Mixed Land Ownerships** *(interspersed public and private lands; interspersed agriculture)*
Citizens	Non –lethal harassment →	→	→	→
	Lethal take in defense of life/property →	→	→	→
Agency personnel	MFWP Guidelines for Nuisance Wolves →	→	→	→
or	Non-lethal harassment →	→	→	→
Local Law Enforcement	Lethal removal if threat to public safety →	→	→	→
Montana Fish, Wildlife & Parks	Public outreach to inform & address specific needs →	→	→	→
	Discourage wolf habituation →	→	→	→

***** Montana shares a legal requirement with the states of Idaho and Wyoming to maintain a minimum total of 30 breeding pairs in the region. Since not all packs successfully breed and have pups every year, Montana will maintain at least 14-17 packs statewide to insure achievement of a minimum number of 10 breeding pairs with at least two pups on December 31.

A wolf management plan for any state will be controversial. Personal opinions, anecdotal experiences, and personal biases lead to emotional and sometimes irrational viewpoints, creating a challenging environment in which to manage the species. MFWP recognizes the importance, value, and need for an educational program to parallel wolf management activities. The objective is to provide scientifically based, factual information regarding the gray wolf and its management in Montana, in hopes that the public will become more knowledgeable, more objective, and less emotional about this species and its management. Strong outreach programs may also help decrease the level of illegal mortality.

MFWP will acquire any and all information utilized in the education program from all available sources, including other state and federal agencies and non-governmental sources. MFWP will take a leadership role in formulating and disseminating educational materials. However, the information sources will be wide-ranging and include other state and federal agencies, non-governmental organizations with a variety of interests, and Native American tribes. All material provided to MFWP and included in the program must be factual and have a foundation of scientific scrutiny. MFWP will be ultimately responsible for content. A collaborative approach will also be necessary to

ensure that different groups do not put out conflicting information that could erode public understanding and acceptance of the wolf management program.

The audience of the education program will include (but not be limited to) the general public, students, visitors to the state, sportspersons and outdoor recreationists, the agricultural community, and agency personnel. While the specific emphasis may differ by audience, it is important to convey some basic information to everyone, such as wolf numbers and distribution in Montana, identification and ecology of the species, and guidelines for ethical viewing. The values and challenges of wolf conservation and management will also be conveyed. Delivery of educational information will also target specific audiences. For example, hunting and trapping regulations may emphasize wolf vs. coyote identification more strongly than educational materials intended for elementary school students.

The MFWP Conservation Education Division has the primary responsibility to develop a public outreach/educational plan for Montana (Appendix 8). Informally, personnel from all MFWP Divisions will disseminate information to the public on a routine basis, much as they already do for all fish and wildlife species in Montana. However, the tremendous need for public outreach on such a controversial species requires that MFWP create partnerships with the private sector to help us meet those needs.

It will be important to identify the most efficient ways to reach various audiences, which means gaining an improved understanding of where they get their information. For example, in the mid 1980's, rural residents along the west boundary of GNP and the general hunting population of Flathead County got their information about wolves from different sources (Tucker and Pletscher 1989). Dispersed rural residents relied on people (neighbors or biologists) more than on printed media. In contrast, the hunting population used newspapers, books, and magazines as their primary information sources. Furthermore, the hunter sample did not regularly attend public meetings and already had strong opinions about wolves. For mountain lions, a combination of mass media and agency communications is required for developing general public knowledge and acceptance (Riley and Decker 2000). Given the broad spectrum of interests with a stake in wolf conservation and management, the education program will utilize a broad spectrum of methods and outlets to adequately fulfill this fundamental component of Montana's wolf plan.

Implementation

Appendix 8 describes the Public Information Plan. Some of the activities fall within existing duties and responsibilities already carried out by MFWP but some activities clearly add to existing responsibilities and workloads. Additional resources will be required to implement these new responsibilities. A draft budget is presented as Appendix 3. The budget outlines the personnel and financial resources necessary to fulfill the public outreach and educational needs outlined in this Chapter. Getting information out to the public is an important function that is inherent in many of the management activities described in this plan. The budget truly reflects the comprehensive nature of designing and implementing a wolf conservation and management program. While this budget represents our best projection of the resources required, we cannot assess its accuracy until MFWP actually assumes management authority and begins implementation. Some components of the wolf program may not be captured fully by this draft budget. There may also be costs that could not be predicted at this time or were unforeseen. This budget will be refined in the future as MFWP gains more experience with wolf management. MFWP will pursue all possible funding sources including, but not limited to public/private foundations, federal or state appropriations, and other private sources. Adequate funding will be necessary to fully implement the wolf conservation and management provisions of this Chapter.

PLAN MONITORING AND EVALUATION

Upon delisting and with adequate funding secured, MFWP will implement the Wolf Conservation and Management Plan. This plan will guide MFWP managers and others responsible for the planning and policy decisions that affect wolf management in Montana. It will also guide decision-making at the field level. MFWP personnel will use this plan to prioritize field activities, manage time/budgets, formulate wolf management recommendations, and coordinate with personnel of other state and federal agencies. Personnel of other state or federal agencies will also use this plan as a source of information and guidance.

During the first five years after delisting, MFWP will be required to document that the wolf population in Montana is secure and exceeds the relisting criteria identified when wolves are delisted. MFWP will consult with USFWS on a regular basis, including a periodic formal review by the USFWS. USFWS will point out any deficiencies or areas of concern and recommend corrective actions to MFWP. The State of Montana recognizes that the interests of its citizens are best served by maintaining a secure, viable population that is managed by MFWP and its cooperating partners and not the federal government. We would take the necessary corrective measures to avoid a relisting of the gray wolf under ESA.

During the first five years, MFWP will also confer with other state and federal agencies in Montana. Ongoing consultation will evaluate aspects of the management program as they intersect with the responsibilities and jurisdictions of the other agencies. Conferring with cooperating partners such as WS will also help identify any necessary modifications stemming from unanticipated or unforeseen events. MFWP will also confer with the states of Idaho and Wyoming. These consultations will assess the collective adequacy of the three state plans to maintain a viable wolf population in the northern Rockies. These elements are discussed in more detail in the Interagency, Interstate, and Tribal Coordination section of the Wolf Conservation and Management Chapter.

The Wolf Conservation and Management Plan will also serve as a source of information and provide guidance to the MFWP Commission. However, the plan does not preempt MFWP Commission authority to formulate annual rules, set hunting and trapping season regulations, or implement emergency actions in response to unexpected events or circumstances. Whereas the MFWP Commission cannot modify the plan per se, it does have statutory authority to evaluate and modify how certain elements are implemented.

As with any wildlife management program, MFWP anticipates that the wolf program will evolve through time. MFWP will undertake a thorough, formal review of the wolf management program following the five-year USFWS oversight period required by ESA. Cooperating state and federal agencies will also participate. Findings of the review will be incorporated. The wolf management program will be subsequently reviewed at least every five years and modified to insure that the document will be as current as is practical and that the management activities originating from it are effective and appropriate.

This plan describes an adaptive management model for wolves in Montana. MFWP views the adaptive management approach as an important underpinning of the monitoring and evaluation of the Wolf Conservation and Management Plan. By definition, an adaptive model incorporates monitoring and evaluation components as an ongoing effort within the management program. Management is thus refined and improved through time as information and experience accumulate. MFWP will evaluate new information annually and incorporate it into wolf management.

An adaptive model will help address and evaluate the wolf-specific components of this plan. For example, are viable populations of wolves being maintained? Are the monitoring protocols adequate to assess wolf population trends or other biological parameters of interest? Adaptive management principles already incorporated into ungulate management programs serve the same purpose. For example, are adequate populations of prey species being maintained to sustain a wolf population and provide citizens with the opportunity to hunt a wide variety of species under a wide variety of circumstances in a sustainable manner? The advantage of managing adaptively is that, by definition, it provides a framework and a process for decision-making, as well as the mechanism to monitor and evaluate the outcomes.

Equally important components of any wolf management program are the social factors that shape public tolerance for wolves and their satisfaction with how conflicts are resolved. For example, is the management program adequately and efficiently addressing wolf-livestock conflicts? Is public safety assured? These are important management program components for which ongoing evaluation is critical. MFWP anticipates that Montana citizens will readily identify real or perceived problems or shortcomings of the wolf management program – on these topics and others.

The challenge for MFWP will be to discern between earnest differences of opinion in preferred management direction and substantive shortcomings of the program. Wolf management in Montana will take place within a complex biological, social, economic, and political environment. Difficult decisions will have to be made and will sometimes be called into question by various interests. However, the ensuing public dialogue will also help evaluate the management program and may lead to revisions. The Wolf Management Advisory Council recommended that

the State of Montana continue to engage a diverse advisory citizen's group to collaborate on the management of wolves. The Department, after reviewing input from the public, wildlife professionals, coordinating states, other state and federal agencies, etc., will modify and adapt the wolf management program in the future to maintain a viable wolf population within a complex environment.

FUNDING

Throughout its 100-year history, MFWP has actively restored, perpetuated, and managed the fish and wildlife resources of the state. Fees generated through the sale of hunting and fishing licenses and matching federal monies have funded these activities. As MFWP moves towards assuming the management responsibility for the gray wolf, we acknowledge our commitment to use MFWP and matching federal funds to conserve and manage this native species on equal standing with other carnivore species such as mountain lions and black bears. We also acknowledge that existing financial resources are not adequate to fully implement all aspects of this plan. Additional funding will be required to implement the wolf management element (and related activities) and the compensation program element. While the monies and administrative procedures for these parallel elements may or may not originate from the same source, adequate funds for each element are necessary to implement the plan. We will seek additional funding from a diversity of sources, including special state or federal appropriations, private foundations, or other private sources.

A program being pursued by the Governors of Montana, Idaho, and Wyoming is called the Northern Rocky Mountain Grizzly Bear and Gray Wolf National Management Trust. The purpose of the Trust is to generate sustainable funding for the long-term conservation of grizzly bear and gray wolf populations in the northern Rockies. The National Fish and Wildlife Foundation, a charitable non-profit corporation dedicated to the conservation of fish, wildlife, and plants and the habitats on which they depend, would financially administer the Trust. An endowment would be established, the annual interest earnings of which would fund actions necessary for species recovery or the implementation of state conservation and management plans.

More specifically, the Trust would identify, support, and fund initiatives which address grizzly and gray wolf management, monitoring, and other conservation needs, including habitat protection, species protection, scientific research, conflict resolution, compensation for damage, and education and outreach activities. The establishment of the Trust will be made with the understanding that state agencies will continue to seek necessary state appropriations and spending authority for the management and recovery of the species, consistent with their statutory mandates. The Trust will build coalitions among local, state, regional, federal, and international entities to leverage support and guide policies for grizzly bear and gray wolf conservation.

When the Trust prospectus is finalized, it will be forwarded to the respective Congressional delegations of the three states for their consideration. It is hoped that the tri-state Congressional delegation will recognize the need for secure, long term funding to address the unique challenges associated with the conservation and management of these species of significant national interest. The timing of any special federal appropriation to establish the Trust is uncertain, given other national priorities before Congress. However, the Governors hope that the fund could be developed and appropriated by the year 2003, with an initial balance of at least $40 million.

Another potential source of long-term funding for the Montana wolf conservation and management program is the Conservation and Reinvestment Act (CARA), a piece of conservation legislation introduced in February 2001 before the 107th Congress. CARA directs appropriations from the income generated by federal offshore oil and natural gas leases to state, federal and local conservation programs. Examples include fish and wildlife restoration, parks and outdoor recreation, coastal conservation, and historic preservation. The underlying premise is that revenues derived from the exploitation of the nation's non-renewable oil and gas resources should be reinvested in the protection and restoration of renewable natural resources such as fish and wildlife, public lands, and coastlines. Title III would provide annual appropriations to the states specifically for fish and wildlife programs, outdoor recreation, and conservation education. These funds are intended to fulfill a need for funding of less traditional management programs for species that are typically not hunted or fished. MFWP could use these funds for the wolf management element (and related activities), but not for the compensation program element. Those funds would still need to be secured elsewhere. CARA has garnered broad bi-partisan support. The National Governors' Association and the

Western Governors' Association have both publicly endorsed the concepts of CARA. However, the timing of any Congressional action on this legislation is also uncertain give other national priorities.

The National Management Trust and CARA have the greatest potential to provide the necessary supplemental funding. Both are stable, long-term sources of funding and engage the national interests that desire to see wild, free-roaming wolves in the northern Rockies. While MFWP also recognizes the value of having free-roaming wolves in the northern Rockies, we also seeking financial assistance to conserve and manage the species within a complex biological, social, economic, and political environment. Finding the balance without adequate funding will be very difficult.

A draft budget is presented as Appendix 3. The budget outlines the personnel and financial resources necessary to fulfill the responsibilities of wildlife conservation and management, law enforcement, assurance of human safety, public outreach, resolution of wolf-livestock conflicts, compensation, and program administration. The budget truly reflects the comprehensive nature of designing and implementing a wolf conservation and management program and its related elements such as compensation.

While this budget represents our best projection of the resources required, we cannot assess its accuracy until MFWP actually assumes management authority and begins implementation. Some components of the wolf program may not be captured fully by this draft budget. There may also be costs that could not be predicted at this time or were unforeseen. We also anticipate that the actual costs of implementation will vary from year to year. Some components of the program will come in under budget in some years, but in other years these same components may be in over budget. This budget will be refined in the future as MFWP gains more experience with wolf management. MFWP will pursue all possible funding sources including, but not limited to public/private foundations, federal or state appropriations, and other private sources.

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MFWP PREPARERS and CONTRIBUTORS

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GLOSSARY OF TERMS AND ABBREVIATIONS

adaptive management: a model for wolf conservation and management in which the number of wolf packs determines the appropriate management strategies; changes in the number of packs determined through a monitoring program directs selection of more conservative or liberal management strategies; model incorporates resource objectives, monitoring protocols, evaluation of predicted outcomes, and a decision process

aggression: dominance behavior typical of canid species demonstrated towards humans

BLM: U.S. Bureau of Land Management

CITES: Convention on International Trade in Endangered Species

compensation: monetary payment to offset or replace the economic loss for a death or injury to livestock or guarding animals due to wolf activity; may also entail financial assistance to livestock producers to offset costs associated with modification to husbandry practices to minimize the potential for wolf-livestock conflicts

confirmed depredation: incident where Wildlife Services conducts a field investigation of dead or injured livestock, at the request of the producer; depredation is *confirmed* in cases where there is reasonable physical evidence that an animal was actually attacked and/or killed by a wolf. The primary confirmation would ordinarily be the presence of bite marks and associated subcutaneous hemorrhaging and tissue damage, indicating that the attack occurred while the victim was alive, as opposed to simply feeding on an already dead animal. Spacing between canine tooth punctures, feeding pattern on the carcass, fresh tracks, scat, hairs rubbed off on fences or brush, and/or eye witness accounts of the attack may help identify the specific species or individual responsible for the depredation. Predation might also be confirmed in the absence of bite marks and associated hemorrhaging (i.e. if much of the carcass has already been consumed by the predator or scavengers) **if** there is other physical evidence to confirm predation on the live animal. This might include blood spilled or sprayed at a nearby attack site or other evidence of an attack or struggle. There may also be nearby remains of other victims for which there is still sufficient evidence to confirm predation, allowing reasonable inference of confirmed predation on the animal that has been largely consumed

Council: Montana Wolf Management Advisory Council

defense of life/property: release from criminal liability for killing or injuring a wolf if the wolf is attacking, killing, or threatening to kill a person, livestock, or a domestic dog (MCA 87-3-130)

delisting: removal of the gray wolf from the list of "threatened or endangered" species that are managed by the U.S. Fish and Wildlife Service under the Endangered Species Act; delisting requires evaluation of current status of species compared to the delisting criteria with regard to habitat, over utilization, disease/predation, existing regulatory mechanisms, and other factors affecting the continued existence of the species; if the current status is secure in each of the 5 categories and the recovery criteria are met, a species is delisted and managed by the state or tribal fish and wildlife management authority

depredation: incident where livestock or guarding animals are injured or killed

ESA: Endangered Species Act

GNP: Glacier National Park

GYA: Greater Yellowstone Area

habituation: readily visible in close proximity to people or structures on a regular basis; not threatened by close proximity and may even be attracted to human presence or human food sources; extremely rare behavior in wild wolves, but typical behavior for released captive wolf or wolf-dog hybrid; for wolves, may or may not involve food conditioning

illegal mortality: wolf mortality outside the provisions of a special kill permit, defense of life or property, agency management actions, a MFWP Commission approved season, or outside other regulations established for the gray wolf as a legally classified "species in need of management"

guarding animals: domestic animals (dogs, llamas etc.) that escort livestock to decrease likelihood of a depredation incident by aggressively defending livestock in the presence of wolves or other predators

legal mortality: lethal control or mortality of a wolf within the provisions of a special kill permit, defense of life or property, agency management actions, a MFWP Commission-approved season, or the regulations established for the gray wolf as a legally classified "species in need of management"

lethal control: management actions that result in the death of a wolf

livestock: cattle, calves, hogs, pigs, horses, mules, sheep, lambs, goats, and guarding animals

management setting: the combination of landownership patterns, land use, social factors, biological constraints, and physical attributes of the environment that describe a particular area or management situation

management: the collection and application of biological information for the purposes of increasing the number of individuals within species and populations of wildlife, up to the optimum carrying capacity of their habitat, and maintaining such levels. The term includes the entire range of activities that constitute a modern scientific resource program including but not limited to research, census, law enforcement, habitat improvement, and education. Also included within the term, when and where appropriate, is the periodic or total protection of species or populations as well as regulated taking (MCA 87-5-102)

MDOL: Montana Department of Livestock

MFWP: Montana Fish, Wildlife & Parks

mixed landownership: patterns of land ownership where privately owned lands are intermingled with public lands and/or corporate-owned lands; sometimes called a "checkerboard pattern"

NPS: U.S. National Park Service

non-lethal control: a variety of management activities intended to avert or resolve a conflict situation without killing the wolf or wolves in question; examples include non lethal harassment to disrupt or interrupt wolf behaviors, frightening a wolf, monitoring of wolf location using radio telemetry, or relocation

non-lethal harassment: an example of non-lethal control where a wolf is frightened or threatened, but is not mortally wounded or killed; purpose is to discourage wolf activity
near people or livestock; examples yelling, radio-activated noise-makers, or firearms which discharge cracker shells

NPS: National Park Service

probable depredation: incident where Wildlife Services conducts a field investigation of dead or injured livestock, at the request of the producer; having some evidence to suggest possible predation, but lacking sufficient evidence to **clearly** confirm predation by a particular species, a kill may be classified as *probable* depending on a number of other factors such as (1) has there been any recently confirmed predation by the suspected depredating species in the same or nearby area? (2) How recently had the livestock owner or his employees observed the livestock? (3) Is there evidence (telemetry monitoring data, sightings, howling, fresh tracks etc.) to suggest that the suspected depredating species may have been in the area when the depredation occurred? All of these factors, and possibly others, should be considered in the investigator's best professional judgment.

problem wolf: wolf that has attacked livestock, or is a nuisance animal that could potentially compromise human safety

public safety problem or threat: any situation where the continued presence of a carnivore poses a threat to human safety; or, an attack has resulted in the loss of livestock or personal pets; or a human has been physically injured or killed

regulated public harvest: category of legal of wolf mortality where wolves are killed under MFWP Commission-approved seasons and regulations by licensed hunters or trappers; total harvest strictly controlled through permit or quota system; law enforcement as for other managed species

recovery goal: a total of 30 breeding pairs with equitable distribution throughout Montana, Idaho, and Wyoming for three successive years; breeding pair is defined as at least two adult wolves with at least two pups that survive to December; when the *recovery goal* is met, the U.S. Fish and Wildlife Service could initiate the process to remove the gray wolf from the list of threatened and endangered species protected by the Endangered Species Act

relisting: placing the a species back on the federal list of threatened or endangered species protected by the Endangered Species Act; relisting criteria may or may not be similar to delisting criteria; relisting requires evaluation of current status of species compared to criteria with regard to habitat, over utilization, disease/predation, existing regulatory mechanisms, and other factors affecting the continued existence of the species; if current status is not secure with regard to the 5 areas, a species may be relisted.

remove: to place in captivity or to kill under controlled conditions or in a controlled setting determined by management authorities

SB163: Senate Bill 163, Reclassify Certain Species for Management Purposes, passed during the 2001 session of the Montana Legislature and signed into law by Governor Martz

special kill permit: written authorization granted to a property owner by Montana Fish, Wildlife & Parks to kill or destroy a specified number of animals causing damage to private property; permits are only valid under a specific set of conditions or criteria

species in need of management: legal classification of nongame species that are designated by Montana Fish, Wildlife & Parks as needing special management regulations; Montana Fish, Wildlife & Parks, by regulation, establishes the limitations relating to taking, possession, transportation, exportation, processing, sale or offer for sale, or shipment considered necessary to manage nongame wildlife; Except as provided in regulations issued by the Department, it is unlawful for any person to take, possess, transport, export, sell, or offer for sale species designated by Montana Fish, Wildlife & Parks as "in need of management" (MCA 87-5-104 to 87-5-106)

take: to harass, hunt, capture, or kill or attempt to harass, hunt, capture, or kill wildlife

tri-state area: states of Montana, Idaho, and Wyoming, making up the northern Rockies wolf recovery area

unconfirmed: incident where Wildlife Services conducts a field investigation of dead or injured livestock, at the request of the producer; lacking sufficient evidence to classify an incident as depredation in contrast to other possible causes of death, it is classified as *unconfirmed*; it is unclear what the cause of death may have been. The investigator may or may not have much of a carcass remaining for inspection, or the carcass may have deteriorated so as to be of no use; in the context of wolf management, cause of death is attributed to a cause other than wolf predation

undocumented loss: livestock losses for which there is no apparent explanation for the loss; usually in the context of a numerical discrepancy between the number of livestock head at the beginning of the grazing season and what is retrieved at the end of the grazing season; evidence documenting a death is usually not found

USFS: U.S. Forest Service

USFWS: U.S. Fish and Wildlife Service

WMA: Montana Fish, Wildlife & Parks Wildlife Management Area

wolf-human conflict: where a public safety problem develops; a situation where an MFWP employee reasonably determines that the continued presence poses a threat to human safety, an attack has resulted in the loss of livestock or personal pets, or that a human has been physically injured or killed.

wolf-livestock conflict: where a wolf or wolves are loitering, testing, worrying, or otherwise disrupting livestock; also, a situation where a wolf is suspected to have killed or injured livestock or guarding animals

worrying: to disrupt, cause anxiety, make uneasy, or harass repeatedly or over a period of time; also, to seize, especially by the throat, with the teeth and shake or mangle

WS: U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services; federal work unit with responsibility to address and resolve damage caused by wildlife; examples include bird concentrations at airports or depredation on livestock

YNP: Yellowstone National Park

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APPENDIX 1

MONTANA WOLF MANAGEMENT ADVISORY COUNCIL

Report to the Governor

December 5, 2000

Preamble

The State of Montana is committed to recovering wolves. We will ensure that wolf populations are maintained at high enough numbers to prevent their reclassification as "threatened" under federal law in the three-state area of Montana, Idaho, and Wyoming. The State intends to implement positive management programs to make sure that recovery is complete and wolves are integrated as a valuable part of our wildlife heritage. Montana Fish, Wildlife & Parks is already engaged in activities which promote wolf recovery through its efforts on ungulate population monitoring, research, and management, through the acquisition and designation of Wildlife Management Areas, purchase of conservation easements, and other efforts to preserve and restore wildlife habitats.

Currently, the wolf is listed under the federal Endangered Species Act of 1973 and under Montana's own Nongame and Endangered Species Conservation Act passed in 1973. Beginning in the mid-1980's, wolves have become established in Montana, Idaho, and Wyoming through natural recolonization and reintroduction. The U.S. Fish and Wildlife Service (USFWS) anticipates that recovery goals will be met in the foreseeable future. Among the requirements for delisting, the USFWS has determined that the states of Montana, Idaho, and Wyoming must have management plans and other adequate regulatory mechanisms in place to ensure that the recovered wolf population will remain secure within the northern Rocky Mountain Recovery Area following delisting.

The Governors of Montana, Idaho and Wyoming have agreed that regional coordination in wolf management among the states, tribes, and other jurisdictions will be necessary. Furthermore, it is in the best interest of the citizens of their respective states for wolf recovery and delisting to proceed as soon as possible.

The people of Montana have a significant stake in the future management of wolves and should be provided an opportunity to deliberate issues related to wolf recovery and management. The Montana Wolf Management Advisory Council was appointed by Governor Racicot to advise Montana Fish, Wildlife & Parks regarding wolf management in Montana after this species is removed from the lists of federal- and state-protected species, respectively.

We, the Council, recognize wolves as a species native to Montana. Integrating and sustaining wolf populations in suitable habitats will occur within the complex biological, social, economic, and political landscape of Montana. The State of Montana must ensure human safety, safeguard Montana's livestock industry, maintain viable wildlife populations, and uphold the support of people with diverse public interests.

Wolves do well where prey, primarily deer and elk, are abundant. Restoration and maintenance of these prey populations is made possible through the financial investments of those participating in regulated public harvest of deer, elk, and other species. Prey populations are also dependent on open space, which in Montana, is often synonymous with large agricultural operations on private lands. Livestock operations often provide winter or year-round habitat for prey, which in turn may attract wolves and create the potential for wolf-livestock conflicts. It is important to maintain the economic viability of livestock operations that are adversely affected by wolf depredation. In the long run, this ensures habitat availability for both ungulates and wolves. Continued support and investments by those participating in regulated harvest of ungulates will, in time, lead to a regulated harvest of wolves to maintain a balance with prey populations as wolf numbers and distribution increase.

All Montanans share the challenges and opportunities associated with integrating the wolf into our landscape. To honor these diverse perspectives and interests, we, the Council, endorse the following Guiding Principles as the foundation for Montana's Wolf Management Plan.

Guiding Principles

On Behalf of the Public Interest,

- The State of Montana is committed to maintaining wolf populations at numbers high enough to prevent their reclassification as "threatened" or "endangered" under federal law, in the three-state area.

- The State of Montana should contribute a proportionate number of wolf packs towards the recovery goal identified by the USFWS for the states of Montana, Idaho, and Wyoming. We believe that an equitable distribution of packs among the tri-state area is consistent with the biological intent of the Rocky Mountain Recovery Plan, will ensure a well-distributed and viable population in the region, and will foster greater public acceptance for wolf presence in Montana.

- Montana's wolf management program should be proactive, responsive, cost effective and incorporate public outreach to enhance general acceptance. Effective interagency, interstate, and state/tribal coordination will also be required.

- The Council recognizes the ecological and cultural significance of wolves to Native Americans and encourages their cooperation in coordinated management.

- The State of Montana should continue to engage a diverse, advisory citizen group to collaborate on the management of wolves.

- The Montana Wolf Management Plan should guide the management of wolves while allowing Montana Fish, Wildlife & Parks management discretion and flexibility to accommodate the unique attributes of each pack and the site-specific characteristics of its home range.

- Implementation of the Montana Wolf Management Plan should be contingent upon adequate funding, shared by state, federal, and private entities.

- The State of Montana should make a long-term funding commitment to the conservation of wolves, commensurate with existing programs for black bears and mountain lions.

- Montana Fish, Wildlife & Parks should take a lead role in the creation and implementation of a science-based information and education program to increase public knowledge with a goal of reducing the emotion

and controversy regarding wolves and their management. The effort should be collaborative with other agencies and non-governmental organizations.

To Ensure Public Safety,

- The general public, in the unlikely need for defense of human life, may use any means, including lethal take, to address an imminent threat, regardless of location or wolf population status.

- Montana Fish, Wildlife & Parks or a cooperating agency will take action when the continued presence of a wolf (or wolves) poses a potential threat to human safety, consistent with existing guidelines established for black bears and mountain lions.

- The State of Montana may seek statutory authority to regulate the ownership of wolf-dog hybrids, as deemed necessary.

To Maintain Viable Wildlife Populations,

- We recognize that wolves have an important role in the ecosystem.

- Wolves should be encouraged to exist in large, contiguous public land areas where the potential for conflict is lowest. Wolves should be permitted in other areas (mixed land ownership), commensurate with social acceptance and subject to the provisions to protect human safety, the integration of management programs for ungulates and carnivores, and the provisions which address wolf/livestock conflicts.

- The Montana Wolf Management Plan should take a proactive approach to integrate the management of ungulates and carnivores and to maintain traditional hunting heritage and wildlife viewing opportunities.

- Ungulate populations should be enhanced wherever possible (subject to landowner tolerance) to support viable wolf populations, to maintain recreational and viewing opportunities, and to minimize the potential for livestock depredation.

- Montana Fish, Wildlife and Parks should initiate and/or support research efforts to enhance understanding of the complex interactions and population dynamics of ungulate/carnivore ecosystems, in addition to applying adaptive harvest management principles to achieve more effective management.

- Ungulate harvest should be balanced with maintaining sufficient prey populations to sustain viable wolf populations and prevent reclassification under federal law.

- Montana Fish, Wildlife & Parks should have a monitoring program for wolves to document wolf persistence and reproduction in a manner that balances precision and cost-effectiveness.

- Opportunities for regulated public take of wolves through hunting and trapping should be provided as wolf numbers increase, but opportunity should also be consistent with sustaining viable wolf populations into the future, thereby precluding reclassification under federal law.

To Protect the Livestock Industry,

- Economic and other incentives should be provided to livestock producers who voluntarily implement best management practices that decrease the potential for wolf/livestock conflicts.

- Livestock owners should have a quick and efficient means available to them to address wolf depredation problems.

- There should be a positive relationship between wolf numbers and landowner flexibility to address wolf depredation problems on private lands. As wolf numbers increase, landowner flexibility should increase.

- The Council acknowledges that tolerance for wolves on private property is fundamental to wolf population recovery and range expansion. Furthermore, we recognize that wolf recovery in Montana will result in the loss of personal property by wolf predation. Citizens should be compensated for livestock losses at fair market value. Compensation is critical to building tolerance for wolves by citizens who are adversely affected by wolves.

- Montana Fish, Wildlife & Parks funds should not be used to make compensation payments for livestock depredations.

- Montana Department of Livestock and USDA Wildlife Services should take an incremental approach to addressing wolf depredations on livestock, guided by wolf numbers. When wolf numbers are low, more conservative methods should be applied whereas increasingly more aggressive control methods should be applied as wolf numbers increase.

Recommendations

We, the Council, also make the following specific recommendations regarding legislation, funding, and educational efforts necessary for plan implementation.

Legislation

The wolf is listed as a state endangered species in Montana under the Nongame and Endangered Species Conservation Act (87-5-109 MCA) passed in 1973. Under this statute, the wolf is legally protected from take except for specific purposes (scientific, zoological, or educational) or in specific circumstances under a permit issued by the FWP Director. Wolves may also be taken without a permit in emergency situations involving an immediate threat to human life. Action by the Montana Legislature is required to remove a species from a state classification as 'threatened' or 'endangered.'

In 1995, the Montana Legislature passed Senate Bill 394, which amends Title 81 (Department of Livestock) sections by adding the wolf to the definition of predatory animal (81-7-101, MCA). Furthermore, it states, "The Department of Livestock shall conduct the destruction, extermination, and control of predatory animals capable of killing, destroying, maiming, or injuring domestic livestock or domestic poultry, and the protection and safeguarding of livestock and poultry in this state against depredations from these animals" (81-7-102, MCA). This section also states that the Department of Livestock shall "adopt rules applicable to predatory animal control which are necessary and proper for the systematic destruction of the predatory animals by hunting, trapping, and poisoning operations and payments of bounties." The effective date of this Act is "whenever the gray wolf is removed from the list of threatened or endangered species by the appropriate agency of the United States government."

The USFWS will not delist the gray wolf in Montana while the wolf remains classified as a "predatory animal" because FWP would have no ability to regulate take and the Department of Livestock would be required to conduct its extermination. Unless Statute 81-7-101 is amended, Montana would not have adequate regulatory mechanisms in place to assure the USFWS that wolves would not require subsequent reclassification and federal protection under the Endangered Species Act.

Montana Statute 87-3-130 addresses the taking of wildlife to protect persons or livestock. It states that there should be "no criminal liability for the taking of wildlife protected by this chapter if the wildlife is molesting, assaulting, killing, or threatening to kill a person or livestock." After wolves come under state management authority, the Council understands this Statute to also extend to livestock producers protecting their livestock from wolves which are found "molesting, assaulting, killing, or threatening to kill." However, it is unclear whether this statute could also be interpreted to include domestic pets and guarding animals under the concepts of defense of life and protection of livestock.

The Council makes the following legislative recommendations:

- Amend 81-7-101 to remove the wolf from the list of "predatory animals."

- Remove the wolf from its 'endangered' status under the Montana Nongame and Endangered Species Act concurrent with federal action removing the wolf from legal protection under the federal Endangered Species Act.

- Reclassify the wolf as a species "in need of management" consistent with Montana Statutes 87-5-101 through 122, which convey authority to FWP and the FWP Commission to adopt regulations on take, including permitting livestock producers to take depredating wolves, hunting seasons, trapping regulations, etc. The FWP Commission may then confer a big game or furbearer status to the wolf when wolf numbers have increased to the point where regulated public take becomes appropriate. It should be the intent of the FWP Commission that regulated public take provisions allow hunting and trapping activities, subsequent to Commission oversight.

- Amend Statute 87-3-130 to include pets (domestic dogs) and guard dogs (including guard llamas) under the defense of life and property concept, if legal interpretation concludes that they are not already.

Funding

The Council believes that implementation of the Montana Wolf Management Plan should be contingent upon adequate funding. We recommend that the State of Montana pursue all possible funding sources including, but not limited to, public/private foundations, federal or state appropriations, and other private sources.

Education

A wolf management plan for the state will be controversial. Personal opinions, anecdotal experiences, and biases for and against the wolf lead to emotional and often irrational viewpoints, creating a challenging environment in which to manage wolves. Therefore, the Council recognizes the importance, value, and need for an educational program to parallel management activities. The objectives of a sound wolf management education program should be to provide science-based and factual information regarding the wolf and its management in Montana, in the hopes that the public will become more knowledgeable, more objective, and less emotional regarding this species and its management.

Montana Fish, Wildlife & Parks should be the lead agency in the formulation and dissemination of an educational program. However, the information sources should include other state and federal agencies, non-governmental organizations, and tribes. All material provided to FWP and included in the program must be validated as factual and have a foundation of scientific data. Assuring the soundness of information will be the responsibility of FWP. This collaborative approach is also necessary to ensure that different groups do not put out conflicting information, which could undermine agency credibility and erode public acceptance of any wolf management program.

APPENDIX 2

2001 Montana Legislature

SENATE BILL NO. 163: Reclassify Certain Species for Management Purposes

INTRODUCED BY L. GROSFIELD

AN ACT REVISING STATUTES APPLICABLE TO THE MANAGEMENT OF CERTAIN ANIMAL SPECIES; RECLASSIFYING CERTAIN SPECIES TO INCREASE THE STATE'S ABILITY TO MAINTAIN OR REGAIN MANAGEMENT AUTHORITY RATHER THAN HAVING MANAGEMENT AUTHORITY EXERCISED BY THE FEDERAL GOVERNMENT; REVISING THE DEFINITION OF "PREDATORY ANIMAL"; ELIMINATING THE AUTHORITY OF THE DEPARTMENT OF LIVESTOCK TO EXTERMINATE PREDATORY ANIMALS; ALLOWING A PERSON TO PROTECT LIVESTOCK BY KILLING OR ATTEMPTING TO KILL A GRIZZLY BEAR THAT IS IN THE ACT OF ATTACKING OR KILLING LIVESTOCK; ALLOWING THE AMENDMENT OF REGULATIONS FOR A SPECIES IN NEED OF MANAGEMENT WITHOUT LEGISLATIVE APPROVAL; PROVIDING FOR MANAGEMENT OF THE GRAY WOLF IF IT IS REMOVED FROM THE FEDERAL AND STATE LISTS OF THREATENED OR ENDANGERED WILDLIFE; AMENDING SECTIONS 81-7-101, 81-7-102, 81-7-103, 81-7-104, 87-3-127, 87-3-130, AND 87-5-105, MCA; REPEALING SECTION 7, CHAPTER 244, LAWS OF 1995; AND PROVIDING AN IMMEDIATE EFFECTIVE DATE.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Section 81-7-101, MCA, is amended to read:

~~**"81-7-101. (Temporary) Definition.** For the purpose of this part the term "wild animal" shall include coyote, lynx, and any other animal causing depredations upon livestock.~~

81-7-101. ~~(Effective on occurrence of contingency)~~ Definition. For the purpose of this part, the term "predatory animal" includes ~~gray wolf,~~ coyote, red fox,~~lynx,~~ and any other individual animal causing depredations upon livestock."

Section 2. Section 81-7-102, MCA, is amended to read:

~~**"81-7-102. (Temporary) Department to supervise destruction of predatory animals -- cooperation with other agencies -- administration of moneys.** (1) The department of livestock shall conduct the destruction, extermination, and control of wild animals predatory in nature and capable of killing, destroying, maiming, or injuring domestic livestock or domestic poultry, and the protection and safeguarding of livestock and poultry in this state against depredations from these animals. The department shall formulate the practical programs for accomplishing these objectives in this state and for carrying out the programs in an efficient and practical manner responsive to the need for control in each area of this state.~~

~~(2) The department shall adopt rules applicable to predatory animal control which are necessary and proper for the systematic destruction of the wild animals by hunting, trapping, and poisoning operations and payments of bounties. The department shall make field, area, range, or other orders and instructions, including orders and instructions to hunter and trapper personnel and others, which are appropriate in the various areas at different~~

~~seasons of the year, taking into consideration the habits, presence, migrations, or movements of the animals and their attacks on livestock and poultry, either singly or in packs or bands.~~

~~(3) The department shall cooperate with authorized representatives of the federal government, including the biological survey and the fish and wildlife service, the department of fish, wildlife, and parks, boards of county commissioners, voluntary associations of stockgrowers, sheepgrowers, ranchers, farmers, and sportsmen, and corporations and individuals, in the systematic destruction of wild animals by hunting, trapping, and poisoning operations.~~

~~(4) This section and 81-7-103 do not interfere with or impair the power and duties of the department of fish, wildlife, and parks in the control of predatory animals by the department of fish, wildlife, and parks as authorized by law, or the obligation of the department of fish, wildlife, and parks to expend its funds in cooperation with the department for predatory animal control as required by law. Funds of the department of fish, wildlife, and parks for the cooperative predatory animal control shall be administered and expended by the department of fish, wildlife, and parks.~~

81-7-102. ~~(Effective on occurrence of contingency)~~ Department to supervise destruction of predatory animals -- cooperation with other agencies -- administration of money. (1) The department of livestock shall conduct the destruction~~, extermination,~~ and control of predatory animals capable of killing, destroying, maiming, or injuring domestic livestock or domestic poultry~~,~~ and the protection and safeguarding of livestock and poultry in this state against depredations from these animals. The department shall formulate the practical programs for accomplishing these objectives in this state and for carrying out the programs in an efficient and practical manner responsive to the need for control in each area of this state.

(2) The department shall adopt rules applicable to predatory animal control ~~which~~ that are necessary and proper for the systematic destruction of the predatory animals by hunting, trapping, and poisoning operations and payments of bounties. The department shall make field, area, range, or other orders and instructions, including orders and instructions to hunter and trapper personnel and others, ~~which~~ that are appropriate in the various areas at different seasons of the year, taking into consideration the habits, presence, migrations, or movements of the animals and their attacks on livestock and poultry, either singly or in packs or bands.

(3) The department shall cooperate with authorized representatives of the federal government, including the biological survey and the fish and wildlife service, the department of fish, wildlife, and parks, boards of county commissioners, voluntary associations of stockgrowers, sheepgrowers, ranchers, farmers, and sportsmen, and corporations and individuals, in the systematic destruction of predatory animals by hunting, trapping, and poisoning operations.

(4) ~~This section and~~ Section 81-7-103 and this section do not interfere with or impair the power and duties of the department of fish, wildlife, and parks in the control of predatory animals by the department of fish, wildlife, and parks as authorized by law~~,~~ or the obligation of the department of fish, wildlife, and parks to expend its funds in cooperation with the department for predatory animal control as required by law. Funds of the department of fish, wildlife, and parks for the cooperative predatory animal control must be administered and expended by the department of fish, wildlife, and parks."

Section 3. Section 81-7-103, MCA, is amended to read:

"81-7-103. Administration of funds by ~~the~~ department. The department shall administer and expend for predatory animal ~~extermination and~~ control all money ~~which~~ that is made available to it, including the money allocated for this purpose under 81-7-104 and all money ~~which~~ that is made available to the department by appropriations made by the legislature for predatory animal control by the department. The department shall expend the funds for predatory animal control by all effective means responsive to the necessities of control in various areas of the state, including employment of hunters, trappers, and other personnel, procurement of traps, poisons, equipment, and supplies, and payment of bounties in the discretion of the department at those times of the year it considers advisable."

Section 4. Section 81-7-104, MCA, is amended to read:

~~**"81-7-104. (Temporary) Predator control moneys -- use of proceeds.** (1) The department of livestock shall allocate a portion of the money from the levy under 15-24-921 for the purpose of protecting livestock in the state against destruction, depredation, and injury by wild animals, whether the livestock is on lands in private ownership, in the ownership of the state, or in the ownership of the United States, including open ranges and all lands in or of the public domain. This protection may be by any means of effective predatory animal destruction, extermination, and control, including systematic hunting and trapping and payment of bounties.~~

~~(2) Money shall be paid out only on claims duly and regularly presented to the department of livestock and approved by the department in accordance with the law applicable either to claims for bounties or for other expenditures necessary and proper for predatory animal control by means and methods other than payment of bounties, as determined by the department. Money designated for predator control shall be available for the payment of bounty claims and for expenditures for planned, seasonal, or other campaigns directed or operated by the department in cooperation with other agencies for the systematic destruction, extermination, and control of predatory wild animals, as determined by the department and its advisory committee. No claims may be approved in excess of moneys available for such purposes, and no warrants may be registered against the moneys.~~

81-7-104. ~~(Effective on occurrence of contingency)~~ Predator control money -- use of proceeds. (1) The department of livestock shall allocate a portion of the money from the levy under 15-24-921 for the purpose of protecting livestock in the state against destruction, depredation, and injury by predatory animals, whether the livestock is on lands in private ownership, in the ownership of the state, or in the ownership of the United States, including open ranges and all lands in or of the public domain. This protection may be by any means of effective predatory animal destruction~~, extermination,~~ and control, including systematic hunting and trapping and payment of bounties.

(2) Money ~~must~~ may be paid out only on claims duly and regularly presented to the department of livestock and approved by the department in accordance with the law applicable either to claims for bounties or for other expenditures necessary and proper for predatory animal control by means and methods other than payment of bounties, as determined by the department. Money designated for predator control must be available for the payment of bounty claims and for expenditures for planned, seasonal, or other campaigns directed or operated by the department in cooperation with other agencies for the systematic destruction~~, extermination,~~ and control of predatory animals, as determined by the department and its advisory committee. Claims may not be approved in excess of money available for those purposes, and warrants may not be registered against the money."

Section 5. Section 87-3-127, MCA, is amended to read:

"87-3-127. Taking of stock-killing animals. (1) Livestock owners, their agents, or employees of the department or ~~the~~ a federal ~~fish and wildlife service~~ agency may use dogs in pursuit of stock-killing black bears, stock-killing mountain lions, and stock-killing bobcats. Other means of taking stock-killing black bears, stock-killing mountain lions, and stock-killing bobcats may be used, except ~~the use of~~ the deadfall.

(2) Traps used in capturing bears ~~shall~~ must be inspected twice each day with the inspections 12 hours apart."

Section 6. Section 87-3-130, MCA, is amended to read:

"87-3-130. Taking of wildlife to protect persons or livestock. (1) This chapter may not be construed to impose, by implication or otherwise, criminal liability for the taking of wildlife protected by this chapter if the wildlife is ~~molesting, assaulting,~~ attacking, killing, or threatening to kill a person or livestock, except that, for purposes of protecting livestock, a person may not kill or attempt to kill a grizzly bear unless the grizzly bear is in the act of attacking or killing livestock. In addition, a person may kill or attempt to kill a wolf or mountain lion that is in the act of attacking or killing a domestic dog. A person who ~~so~~ takes wildlife protected by this chapter shall notify the department within 72 hours.

(2) A person may not intentionally provide supplemental feed to game animals in a manner that results in an artificial concentration of game animals that may potentially contribute to the transmission of disease. A person who violates this subsection is guilty of a misdemeanor and is subject to the penalty provided in 87-1-102(1). This subsection does not apply to supplemental feeding activities conducted by the department for disease control purposes.

(3) As used in this section, "livestock" includes ostriches, rheas, and emus."

Section 7. Section 87-5-105, MCA, is amended to read:

"87-5-105. Regulations to manage nongame wildlife. (1) On the basis of the determinations made pursuant to 87-5-104, the department shall issue management regulations. ~~Such~~ The regulations ~~shall~~ must set forth species or subspecies of nongame wildlife ~~which~~ that the department ~~deems~~ considers to be in need of management pursuant to 87-5-104 through 87-5-106, giving their common and scientific names by species and subspecies. ~~The department may from time to time amend such regulations on the approval of the legislature by adding or deleting therefrom species or subspecies of nongame wildlife.~~

(2) The department shall by ~~such regulations~~ regulation establish ~~proposed~~ limitations relating to taking, possession, transportation, exportation, processing, sale or offer for sale, or shipment ~~as may be deemed~~ considered necessary to manage ~~such~~ nongame wildlife that is designated in need of management. ~~The department may make such changes in the proposed regulations as are consistent with effective management of nongame wildlife as designated by the legislature.~~"

Section 8. Process for delisting of gray wolf -- management following delisting. (1) If the United States fish and wildlife service removes the Northern Rocky Mountain or gray wolf from the United States' list of endangered or threatened wildlife, the department is authorized to remove the wolf from the state list of endangered species upon a determination by the department pursuant to this part that the wolf is no longer endangered.

(2) Following state delisting of the wolf, the department shall manage the wolf as a species in need of management until the department and the commission determine that the wolf no longer needs protection as a species in need of management and can be managed and protected as a game animal. Upon making that determination, the commission may declare the wolf a big game animal or a furbearer and may regulate the taking of a wolf as a big game animal or furbearer.

(3) Following state delisting of the wolf, the department, or the department of livestock, pursuant to 81-7-102 and 81-7-103, may control wolves for the protection and safeguarding of livestock if the control action is consistent with a wolf management plan approved by both the department and the department of livestock.

Section 9. Repealer. Section 7, Chapter 244, Laws of 1995, is repealed.

Section 10. Codification instruction. [Section 8] is intended to be codified as an integral part of Title 87, chapter 5, part 1, and the provisions of Title 87, chapter 5, part 1, apply to [section 8].

Section 11. Effective date. [This act] is effective on passage and approval.

- END -

New language in a bill appears underlined, deleted material appears stricken.

APPENDIX 3

WOLF PLAN IMPLEMENTATION BUDGET

Program / Activity	*Estimated Budget*
Montana Fish, Wildlife & Parks	
Wildlife	
Staff (4.30 FTE):	
Wolf Specialists (4.0 FTE)	$149,516
Operations	$156,000
Enhanced Ungulate Monitoring	$ 50,000
Wildlife Lab (.30 FTE)	$ 8,280
Wildlife Lab Operations	$ 7,000
Total	**$370,796**
Enforcement	
Staff(2.5 FTE):	
Game Wardens (2.5 FTE)	$ 86,250
Operations	$ 70,500
Total	**$156,750**
Information & Education	
Staff (.75 FTE):	
Information Officers (.50 FTE)	$ 29,000
Headquarters Staff (.25 FTE)	$ 14,500
Operations	$ 6,000
Total	**$ 49,500**
Administration	
Staff (.75 FTE)	
Program Coordination (Hdqtrs/Field) (.5 FTE)	$ 27,000
Support Staff (Hdqtrs/Field)(.25 FTE)	$ 10,000
Operations	$ 10,000
Total	***$ 47,000***
Depredation	**$100,000**
Wildlife Services (USDA/APHIS) Cooperative Wolf Damage Management and State Directed Predator Control	
MFWP ANNUAL TOTAL.....	**$724,046**
Other Agency/Private	
Compensation for Livestock Losses:	
Estimate based upon current payments by Defenders Of Wildlife Wolf Compensation Trust Fund Program and estimated 20 wolf packs within Montana	**$ 41,250**
Annual Total (Including Compensation)	**$765,296**

APPENDIX 4

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APPENDIX 5

Rocky Mountain States: Confirmed Wolf Depredation and Wolf Control, 1987-2000

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
Northwest Montana Recovery Area:															
Cattle	6	0	3	5	2	1	0	6	3	9	16	9	13	10	83
Sheep	10	0	0	0	2	0	0	0	0	0	30	0	19	2	63
Dogs	0	0	0	1	0	0	0	0	2	1	0	0	2	3	9
wolves moved	0	0	4	0	3	0	0	2	2	10	7	0	4	0	32
wolves killed	4	0	1	1	0	0	0	0	0	4	14	4	9	4	41
Yellowstone Recovery Area:															
Cattle									0	0	5	3	4	7	19
Sheep									0	13	67	7	13	39	139
Dogs									1	0	0	4	6	8	19
wolves moved									6	8	14	0	0	6	34
wolves killed									0	1	6	3	9	6	25
Central Idaho Recovery Area:															
Cattle									0	4	1	10	16	15	46
Sheep									0	24	29	5	57	39	154
Dogs									0	0	4	0	5	0	9
wolves moved									0	5	0	3	15	10	33
wolves killed									0	1	1	0	6	10	18
Total, 3 States, 3 Recovery Areas:															
Cattle	6	0	3	5	2	1	0	6	3	13	22	22	33	32	148
Sheep	10	0	0	0	2	0	0	0	0	37	126	12	89	80	356
Dogs	0	0	0	1	0	0	0	0	3	1	4	4	13	11	37
wolves moved	0	0	4	0	3	0	0	2	8	23	21	3	19	16	99
wolves killed*	4	0	1	1	0	0	0	0	0	6	21	7	24	20	84

* Includes 2 wolves legally shot by ranchers. Others killed in government control efforts.

Source: U.S. Fish and Wildlife Service, Nez Perce Tribe, National Park Service, and USDA Wildlife Services. 2001. Rocky Mountain Wolf Recovery 2000 Annual Report. USFWS, Helena Montana. 35pp.

OR

http://mountain-prairie.fws.govwolf/annualrpt00/

Appendix 6

SHEEP AND LAMB LOSSES

By Non-Predator Cause and Number of Head, Montana, USA*

1984-2000

Last updated February 27, 2001

NON-PREDATOR											
Year	Weather Conditions	Disease	Poison	Lambing Complic-ations	On Back	Old Age	Theft	Other	Total Non-Predator	Un-known Causes	Total Loss
	Number of Head										
2000	7,000	9,900	1,900	7,700	1,300	5,700	400	3,400	37,300	9,800	66,000
1999	8,600	12,400	1,500	6,900	1,000	3,900	1,200	1,300	36,800	6,900	64,000
1998	10,000	9,300	1,800	9,400	1,000	4,900	700	1,600	38,700	6,500	67,000
1997	26,200	7,800	1,500	6,500	800	4,100	1,300	900	49,100	8,900	85,000
1996	14,500	6,700	1,300	6,600	1,200	4,500	2,400	2,000	39,200	12,600	83,000
1995	14,300	10,000	1,900	8,400	1,200	5,700	2,000	3,400	46,900	8,000	92,000
1994	11,800	15,700	2,200	10,700	1,900	6,500	2,900	2,100	53,800	7,300	104,000
1993	12,000	12,400	2,300	15,700	3,000	7,100	3,300	3,600	59,400	8,400	108,000
1992	11,900	12,300	2,000	16,600	2,300	6,300	2,900	8,700	63,000	7,800	112,000
1991	21,500	14,500	2,600	25,000	2,600	7,300	4,100	5,900	83,500	13,600	142,000
1990	19,100	14,500	2,900	21,700	2,500	9,200	2,500	7,500	79,900	14,000	133,000
1989	23,400	12,900	2,500	17,400	2,600	10,900	3,400	7,700	80,800	24,300	144,000
1988	15,900	15,800	3,400	13,200	3,000	9,500	5,900	18,000	84,700	22,200	150,000
1987	16,900	16,500	4,700	14,000	3,600	12,000	5,500	6,600	79,800	20,300	137,000
1986	18,000	16,000	4,700	8,800	3,300	11,300	3,700	6,300	72,100	17,800	132,000
1985	14,100	11,200	3,600	11,900	3,100	7,500	5,000	3,400	59,800	15,500	127,000
1984	72,800	9,600	2,300	10,700	2,200	5,600	3,200	5,300	111,700	16,600	180,000

1/ Category not available that year. -- Denotes less than 100 head. Please note: Totals may not add due to rounding.

*wolf depredation confirmed by USDA, Wildlife Services is presented in Appendix 5

Source: U.S. Department of Agriculture, National Agricultural Statistics Service, Montana Field Office, Helena, Montana: http://www.nass.usda.gov/mt/livestock/sh&llos4.htm

SHEEP AND LAMB LOSSES

By Predator Cause and Number of Head, Montana, USA*

1984-2000

Last updated February 27, 2001

PREDATOR										
Year	Fox	Dog	Coyote	Eagle	Bobcat	Bear	Mountain Lion	Other Animals	Unknown Predators	Total Predators
	Number of Head									
2000	1,000	1,300	12,900	1,600	--	900	400	100	700	18,900
1999	1,200	600	15,100	1,700	--	400	400	--	900	20,300
1998	2,000	1,200	14,900	2,000	--	300	600	100	700	21,800
1997	2,200	1,000	19,900	2,400	100	400	500	--	500	27,000
1996	2,700	1,400	22,600	2,200	200	800	500	--	800	31,200
1995	3,400	1,600	28,000	2,700	--	300	500	--	600	37,100
1994	6,000	1,000	28,500	5,300	300	600	1,000	200	--	42,900
1993	3,300	1,700	30,700	2,500	200	700	1,000	100	--	40,200
1992	5,000	1,800	31,100	1,900	--	800	600	--	--	41,200
1991	4,900	3,500	33,700	1,300	100	600	600	200	--	44,900
1990	4,000	1,600	29,700	2,200	--	700	600	300	--	39,100
1989	3,500	1,500	28,200	800	400	1,000	500	--	--	35,900
1988	4,200	3,100	31,000	2,700	300	1,300	400	100	--	43,100
1987	2,900	3,100	26,400	2,700	100	1,200	300	200	--	36,900
1986	5,100	2,900	30,500	2,000	100	1,100	400	1/	--	42,100
1985	4,300	1,500	41,600	2,500	100	1,400	300	1/	--	51,700
1984	6,200	2,100	38,300	2,500	200	1,400	1/	1,000	--	51,700

1/ Category not available that year. -- Denotes less than 100 head. Please note: Totals may not add due to rounding.

*wolf depredation confirmed by USDA, Wildlife Services is presented in Appendix 5

Source: U.S. Department of Agriculture, National Agricultural Statistics Service, Montana Field Office, Helena, Montana; http://www.nass.usda.gov/mt/livestock/sh&llos3.htm

CATTLE AND CALF LOSSES

Itemized by Cause, Montana, USA 1995*

TYPE	COWS	CALVES	TOTAL
coyote	(0)	(1,100)	(1,100)
dog	(0)	(200)	(200)
lion/bobcat	(200)	(100)	(300)
other predators	(200)	(400)	(600)
PREDATORS TOTAL	400	1800	2,200
DIGESTIVE	2,600	10,000	12,600
RESPIRATORY	3,600	8,600	12,200
CALVING	2,000	13,900	15,900
WEATHER	2,700	13,100	15,800
POISON	800	900	1,700
THEFT	0	200	200
OTHER	5,000	3,600	8,600
UNKNOWN	5,800	4,900	10,700
TOTAL LOSSES, ALL CAUSES	22,900	57,000	79,900

*wolf depredation confirmed by USDA, Wildlife Services is presented in Appendix 5

*Most recent itemized data available; wolf depredation confirmed by USDA, Wildlife Services is presented in Appendix 5

Source: U.S. Department of Agriculture, National Agricultural Statistics Service, Montana Field Office, Helena, Montana

APPENDIX 7

Compensation payments by Defenders of Wildlife for wolf depredation in states and in the Northern Rockies Recovery Areas, respectively, from 1987 to April, 2001. Cents are not reported.

LOCATION	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
MONTANA	$3,049		$1,730	$4,700	$1,250	$374		$2,322	$1,633	$3,506	$16,495	$4,810	$12,062	$7,935	$1,804	$61,670
IDAHO										$3,977	$3,761	$6,380	$15,694	$24,772	$1,245	$55,829
WYOMING											$12,434	$500	$4,957	$14,338		$32,229
NM/AZ												$466	$2,225	$3,400		$6,091
CANADA								$3,379								$3,379
TOTAL	$3,049	$0	$1,730	$4,700	$1,250	$374	$0	$5,701	$1,633	$7,483	$32,690	$12,156	$34,938	$50,446	$3,049	$159,200

LOCATION	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
Northwest Montana Recovery Area	$3,049		$1,730	$4,700	$1,250	$374		$1,772		$1,485	$7,554	$3,835	$9,567	$4,357	$1,804	$41,477
Central Idaho Exp. Area.										$4,777	$7,492	$6,855	$15,079	$23,022	$1,245	$58,470
Greater Yellowstone Exp. Area								$550	$1,633	$1,221	$17,644	$1,000	$8,067	$19,666		$49,781
TOTAL	$3,049	$0	$1,730	$4,700	$1,250	$374	$0	$2,320	$1,633	$7,483	$32,690	$11,690	$32,713	$47,046	$3,049	$149,730

APPENDIX 8

DRAFT MFWP PUBLIC INFORMATION PLAN

September 2001

INTRODUCTION

Montana Fish, Wildlife & Parks will soon take on management responsibility for the state's gray wolf population.

An accepted and approved Montana Wolf Management Plan will allow MFWP to obtain local management of wolves. The plan must be accepted and approved by the U.S. Fish and Wildlife Service and by the people of Montana.

An estimated 40 breeding wolf packs exist in the Montana, Idaho, and Wyoming recovery areas. A federal plan currently calls for establishing 10 packs in each of the three areas for three years before delisting can occur. Federal wolf managers, however, say that the biological intent of the recovery plan could also be met with a total of 30 packs evenly distributed in the tri-state area. A total of 30 packs for three years could trigger delisting, a process that could begin in 2003.

Once delisted the wolves will come under state management.

MFWP is preparing now to answer questions that will emerge as the state moves toward developing a balanced wolf management plan for Montana. Because wolf management procedures will be closely examined and arouse controversy, MFWP seeks to build a balanced management approach that acknowledges the complexity of the political, social and environmental factors associated with wolves and their management.

Basic questions Montanans and others will expect to have answered include:

- How will wolves be managed?
- What areas will wolves be permitted to inhabit?
- Should Montanans be concerned about public safety?
- Who will fund wolf management in Montana?
- What impacts will wolves have on wildlife populations?
- What impacts will wolves have on livestock?

This draft public information plan will serve as MFWP's initial guide as it prepares to inform the public in Montana and across the nation about gray wolf management in Montana.

OBJECTIVES

1. Increase public awareness of the gray wolf and its recovery in Montana and increase awareness that once delisted the gray wolf will come under state management.

   Answer the following questions:
   - What is a gray wolf?
   - Where are gray wolves found?
   - Why is MFWP going to manage wolves?
   - How will wolves impact wildlife?
   - How will wolves impact livestock?
   - What are the legal aspects of state-run wolf management?
   - What is being done to prepare Montanans for state management of wolves?
   - How can the public participate?

2. Increase awareness of the status of the gray wolf in Montana, the delisting process and delisting milestones.

3. Increase awareness of the array of management tools MFWP will employ once the gray wolf is delisted in Montana.

STRATEGIES
To meet the above objectives, a cooperative approach will be necessary. Partnerships among state and federal agencies, Indian tribes, hunting and conservation groups, the agricultural community, schools, civic groups and others are vital for success. MFWP will also employ targeted information delivery based on MFWP surveys that show where and how Montanans and others get information on natural resource issues. Most strategies will have an associated MFWP website component. Initial strategies include:

Internal Affairs
Use MFWP internal communication vehicles to highlight and explain the Montana Wolf Management Plan

- Prepare a Montana Wolf Management Plan primer for MFWP employees to include information, status and logistics of Montana's wolf management responsibilities.
- Fresh Tracks internal newsletter updates about Montana Wolf Management Plan progress
- Regional and division meetings will include presentations on the Montana Wolf Management Plan

Media
Use statewide media to highlight and explain the Montana Wolf Management Plan

- Prepare a "Montana Wolf Management Plan" news and information kit for news reporters.
- Use paid radio advertising and Public Service Announcements to reach a broad spectrum of the public for an initial announcement focusing on Montana Wolf Management Plan participation and comment; and develop more announcements as the project moves forward.
- Use paid television advertising and PSAs to highlight important information.
- Include selected paid advertisements in local newspapers.
- Expand and update MFWP's Wolf Management website.
- Issue regular news releases to highlight the Montana Wolf Management Plan launch and its progress.
- Produce MFWP "Outdoor Reports" for television news broadcasts

Displays and Information
Use displays and prepared information to highlight and explain the Montana Wolf Management Plan

- Produce a quality full-color pamphlet--suitable for direct mailings, meeting handouts, and website placement--that outlines Montana Wolf Management Plan goals, recovery triggers, management options, and wolf ecology and history in Montana.
- Produce associated portable display and materials for meetings, lobbies, and gatherings.
- Include project specific information in interest group newsletters and MFWP's legislator updates.
- Include project specific information in MFWP license agent newsletters.
- Include project specific information in MFWP Hunter Education newsletters

Presentations
Use statewide presentations that could include, video, PowerPoint, web-based PowerPoint, 35mm slides, and associated educational materials to explain the Montana Wolf Management Plan

- Present objective "wolves in Montana" programs at local schools
- Present objective "wolves in Montana" programs for civic and interest groups
- Conduct or cooperate in "wolves in Montana" discussions at statewide meetings or conventions. For example at the Montana Bowhunters Association, Montana Outfitters and Guides Association, Montana Livestock Association, and Montana Wildlife Federation and other annual gatherings.
- Work closely with MFWP biologists, information center staff, and wardens to enhance their direct contacts; also include biologists and wardens in school presentations and other presentations.

MONTANA Natural Heritage Program

A program of the
Natural Resource Information System,
Montana State Library

Animal Species of Concern

Montana Fish, Wildlife & Parks

August 2001

Introduction

Black-backed Woodpecker
(*Picoides arcticus*)

Illustration by John Carlson

This report on Montana's animal species of concern is the first to be issued jointly by the Montana Fish Wildlife and Parks (MFWP) and the Montana Natural Heritage Program (MTNHP). It is the result of an agreement between MFWP and MTNHP to determine the status of and manage the data associated with Montana Animal Species of Concern. Previously, separate species of concern lists created independently by MFWP and MTNHP caused confusion for the public and agency personnel. In November of 2000, MFWP and MTNHP agreed to create one list of Montana Animal Species of Concern to alleviate this confusion. The format is consistent with previous MTNHP lists, however the former Watch List has been replaced by two new categories to further define the knowledge of these species status. These are *Species of Potential Concern* for species for which population trends indicate a decline, and *Species on Review* for species needing additional data to determine their current status.

The list and ranks assigned to animal species of concern in Montana are used to prioritize data acquisition by MTNHP and MFWP and to provide information to others on the current status of these species. The listings were developed by the Montana Animal Species of Concern Committee, which includes staff of MTNHP and MFWP, representatives of the Montana Chapter of the Wildlife Society and the Montana Chapter of the American Fisheries Society, and biologists with knowledge of specific taxa. Inclusion on the list is based on information in the scientific literature, unpublished reports, agency databases, field research, and field inventories. This information comes from a variety of cooperating local, state, and federal agencies, private organizations and businesses, academic researchers, and interested individuals.

This list is dynamic and is periodically revised as new data becomes available. Changes from the previous edition (Roedel 1999) are **underlined** and **bolded** for quick reference. Revisions are produced annually. This publication is available from MTNHP or electronically on the MTNHP home page at http://nhp.nris.state.mt.us.

Table of Contents

We encourage written comments and suggestions, especially recommended additions or deletions and insights on the status of species. Comments can be sent to John Carlson at the address printed on page 4 or via email at jocarlson@state.mt.us. In addition, we are continuously gathering new location information on all species of concern. Please submit your observations to MTNHP using the form at the end of this report.

More detailed information on species' status and distributions can be obtained from MTNHP using the "Information Request Form" on the website, or by phone, email, or mail. The NatureServe website provides access to information assembled from Natural Heritage Program databases throughout North America (at http://www.natureserve.org/ or via the link from the MTNHP website).

Heritage Program Ranks

Species have been evaluated and ranked on the basis of their global (range-wide) status, and their statewide status, using the standardized ranking system of the Natural Heritage Network (Association for Biodiversity Information 2001).

Species are assigned ranks ranging from 1 (highest concern) to 5 (lowest concern). Rank definitions are given below.

Rank	Definition
G1 S1	Critically imperiled because of extreme rarity or because of some factor making especially vulnerable to extinction.
G2 S2	Imperiled because of rarity or because of other factors demonstrably making it very vulnerable to extinction throughout its range.
G3 S3	Either very rare and local throughout its range, or found locally (even abundantly at some of its locations) in a restricted range, or vulnerable to extinction throughout its range because of other factors.
G4 S4	Apparently secure, though it may be quite rare in parts of its range, especially at the periphery.
G5 S5	Demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery.
GU SU	Possibly in peril, but status uncertain; more information needed.
GH SH	Historically known; may be rediscovered.
GX SX	Believed to be extinct; historical records only, continue search.
G#G# or S#S#	Indicates a range of uncertainty about the rarity of the species.

Other codes

A	Accidental in the state; including species (usually birds or butterflies) recorded very infrequently, hundreds or thousands of miles outside their usual range.
B	A state rank modifier indicating breeding status for a migratory species. Example: S1B,SZN -- breeding occurrences for the species are ranked S1 (critically imperiled) in the state, nonbreeding occurrences are not ranked in the state.
E	An exotic established in the state; may be native in nearby regions.
HYB	Element represents a hybrid of species.
N	A state rank modifier indicating non-breeding status for a migratory species. Example: S1B,SZN -- breeding occurrences for the species are ranked S1 (critically imperiled) in the state, nonbreeding occurrences are not ranked in the state.
P	Indicates the element may potentially occur in the state.
Q	Taxonomic questions or problems involved, more information needed; appended to the global rank.

R	Reported in the state; but lacking documentation which would provide a basis for either accepting or rejecting the report.
T	Rank for a subspecific taxon (subspecies, variety, or population); appended to the global rank for the full species.
Z	Ranking not applicable.
#	A modifier to SX or SH; the species has been reintroduced but the population is not yet established.
?	Inexact or uncertain: for numeric ranks, denotes inexactness.

A number of factors are considered when assigning ranks including the number, size, and distribution of known populations, trends (if known), habitat sensitivity, and life history factors which make species especially vulnerable. For example, the Black-backed Woodpecker (*Picoides arcticus*), G5 / S3, is demonstrably secure range-wide but is found locally within a restricted range in Montana.

Federal Status

Fish and Wildlife Service

The symbols in this column denote the categories defined by the U.S. Fish and Wildlife Service and indicate the status of a taxon under the federal Endangered Species Act of 1973 (16 U.S.C.A. § 1531-1543 (Supp. 1996)).

E	listed endangered.
T	listed threatened
PE	proposed endangered
PT	proposed threatened
C	candidate (those species for which the U.S. Fish and Wildlife Service has sufficient information on biological status and threats to propose to list them as threatened or endangered).

Forest Service

The status of species in Montana as defined by the U.S. Forest Service Manual (2670.22). These species are listed by the Regional Forester (Northern Region) on National Forests in Montana.

S	Sensitive; animal species identified by the Regional Forester for which populatin viability is a concern as evidenced by significant downward trend in population or a significant downward trend in habitat capacity.

Bureau of Land Management

The status of species on Bureau of Land Management lands as defined by the BLM 6840 Manual.

SS	Special Status; federally-listed Endangered, Threatened or Candidate species or other rare or endemic species that occur on BLM Lands.

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More Information

Extensive additional information, including location data, is available on all species listed here. MTNHP serves as an information clearinghouse, and each year responds to hundreds of data requests regarding plants, animals, and biological communities of special concern.

To place a data request, contact us via phone (406-444-3009), email (mtnhp@state.mt.us), or use our online request form (www.nhp.nris.state.mt.us).

MTNHP's website provides direct access to species data, photographs, search tools, and links to related sites. Visit us at www.nhp.nris.state.mt.us.

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Species of Concern

Fish

Common Name	*Scientific Name*	Global Rank	2000 State Rank	USFWS	USFS	BLM
White Sturgeon (Kootenai River Population)	*Acipenser transmontanus pop 1*	G4T1Q	S1	E	S	
Torrent Sculpin	*Cottus rhotheus*	G5	**S3?**		S	
Spoonhead Sculpin	*Cottus ricei*	G5	**S3?**			
Blue Sucker	*Cycleptus elongatus*	G4	**S2S3**			**SS**
Shortnose Gar	*Lepisosteus platostomus*	G5	S1			SS
Sturgeon Chub	*Macrohybopsis gelida*	G2	S2			SS
Sicklefin Chub	*Macrohybopsis meeki*	G3	S1		S	SS
Yellowstone Cutthroat Trout	*Oncorhynchus clarki bouvieri*	G4T2	S2		S	SS
Westslope Cutthroat Trout	*Oncorhynchus clarki lewisi*	G4T3	**S2**		S	SS
Columbia River Redband Trout	*Oncorhynchus mykiss gairdneri*	G5T4	**S1**		S	
Trout-perch	*Percopsis omiscomaycus*	G5	**S2**			
Northern Redbelly X Finescale Dace	*Phoxinus eos x phoxinus neogaeus*	HYB	S3			SS
Paddlefish	*Polyodon spathula*	G4	S1S2			SS
Bull Trout	*Salvelinus confluentus*	G3	**S2**	T	S	
Pallid Sturgeon	*Scaphirhynchus albus*	G1	S1	E		
Pearl Dace	*Semotilus margarita*	G5	S2			SS
Sauger	***Stizostedion canadense***	**G5**	**S2**			
Montana Arctic Grayling	*Thymallus arcticus montanus*	G5T1Q	S1	C	S	SS

Amphibians

Common Name	*Scientific Name*	Global Rank	2000 State Rank	USFWS	USFS	BLM
Coeur D'alene Salamander	*Plethodon idahoensis*	G3	S2		S	SS
Boreal Toad	*Bufo boreas*	G4	**S3**			
Northern Leopard Frog	*Rana pipiens (east of the continental divide)*	G5	**S3**		S	SS
Northern Leopard Frog	*Rana pipiens (west of the continental divide)*	G5	**S1**		S	SS
Great Plains Toad	***Bufo cognatus***	**G5**	**S3**			

Reptiles

Common Name	*Scientific Name*	Global Rank	2000 State Rank	USFWS	USFS	BLM
Sagebrush Lizard	***Sceloporus graciosus***	**G5**	**S3**			
Western Skink	***Eumeces skiltonianus***	**G5**	**S3**			
Spiny Softshell	*Apalone spinifera*	G5	S3			SS
Snapping Turtle	*Chelydra serpentina*	G5	S3			SS
Western Hognose Snake	*Heterodon nasicus*	G5	S3			
Milk Snake	*Lampropeltis triangulum*	G5	S2			
Smooth Green Snake	*Liochlorophis vernalis*	G5	S2S3			

Birds

Common Name	*Scientific Name*	Global Rank	2000 State Rank	USFWS	USFS	BLM
Common Loon	*Gavia immer*	G5	S1S2B,SZN		S	SS
American White Pelican	*Pelecanus erythrorhynchos*	G3	S3B,SZN			
Black-crowned Night-heron	*Nycticorax nycticorax*	G5	**S3B?,SZN**			
White-faced Ibis	***Plegadis chihi***	**G5**	**S1B,SZN**			**SS**
Trumpeter Swan	*Cygnus buccinator*	G4	S2B,S2N		S	SS
Harlequin Duck	*Histrionicus histrionicus*	G4	S2B,SZN		S	SS
Bald Eagle	*Haliaeetus leucocephalus*	G4	S3B,S3N	T		
Northern Goshawk	*Accipiter gentilis*	G5	S3S4		S	SS
Ferruginous Hawk	*Buteo regalis*	G4	S3B,SZN			SS
Peregrine Falcon	*Falco peregrinus*	G4	**S2B, SZN**		S	SS
White-tailed Ptarmigan	***Lagopus leucurus***	**G5**	**S3**			
Columbian Sharp-tailed Grouse	*Tympanuchus phasianellus columbianus*	G4T3	S1		S	SS
Yellow Rail	*Coturnicops noveboracensis*	G4	S1B,SZN			
Whooping Crane	*Grus americana*	G1	**S1N**	E		
Piping Plover	*Charadrius melodus*	G3	S2B,SZN	T		
Mountain Plover	*Charadrius montanus*	G2	S2B,SZN	PT		

(cont'd)

Birds

Common Name	*Scientific Name*	Global Rank	2000 State Rank	USFWS	USFS	BLM
Franklin's Gull	*Larus pipixcan*	G4G5	S3B,SZN			
Caspian Tern	*Sterna caspia*	G5	S2B,SZN			
Common Tern	*Sterna hirundo*	G5	S3B,SZN			
Forster's Tern	*Sterna forsteri*	G5	S2B,SZN			
Interior Least Tern	*Sterna antillarum athalassos*	G4T2Q	S1B,SZN	E		
Black Tern	*Chlidonias niger*	G4	S3B,SZN			SS
Yellow-billed Cuckoo	*Coccyzus americanus*	G5	S3B,SZN			
Barn Owl	***Tyto alba***	**G5**	**S1B,S1N**			
Great Gray Owl	*Strix nebulosa*	G5	S3			SS
Burrowing Owl	*Athene cunicularia*	G4	S3B,SZN		S	SS
Flammulated Owl	*Otus flammeolus*	G4	S3B,SZN		S	SS
Northern Hawk Owl	***Surnia ulula***	**G5**	**S1B,S1N**			
Black Swift	*Cypseloides niger*	G4	S3B,SZN			
Broad-tailed Hummingbird	***Selasphorus platycercus***	**G5**	**S1B,SZN**			
Black-backed Woodpecker	*Picoides arcticus*	G5	S3		S	SS
Lewis's Woodpecker	***Melanerpes lewis***	**G5**	**S3S4B,SZN**			
Red-headed Woodpecker	***Melanerpes erythrocephalus***	**G5**	**S3S4B,SZN**			
Alder Flycatcher	*Empidonax alnorum*	G5	S1B,SZN			
Olive-sided Flycatcher	***Contopus cooperi***	**G5**	**S3B,SZN**			
Cassin's Kingbird	*Tyrannus vociferans*	G5	**S2B?,SZN**			
Boreal Chickadee	***Poecile hudsonica***	**G5**	**S1S2**			
Sedge Wren	***Cistothorus platensis***	**G5**	**S1B,SZN**			
Blue-gray Gnatcatcher	*Polioptila caerulea*	G5	**S1B,SZN**			
Eastern Bluebird	***Sialia sialis***	**G5**	**S2B, SZN**			
Sprague's Pipit	***Anthus spragueii***	**G4**	**S3S4B,SZN**		**S**	
Black-and-white Warbler	***Mniotilta varia***	**G5**	**S2S3B,SZN**			
Dickcissel	*Spiza americana*	G5	S1S2B,SZN			SS
Baird's Sparrow	*Ammodramus bairdii*	G4	S3S4B,SZN		S	SS
Le Conte's Sparrow	*Ammodramus leconteii*	G4	S1S2B,SZN			SS
Nelson's Sharp-tailed Sparrow	*Ammodramus nelsoni*	G5	S1B,SZN			
Black Rosy-Finch	***Leucosticte atrata***	**G4**	**S3**			

Mammals

Common Name	*Scientific Name*	Global Rank	2000 State Rank	USFWS	USFS	BLM
Preble's Shrew	***Sorex preblei***	**G4**	**S3**			**SS**
Dwarf Shrew	*Sorex nanus*	G4	S3			
Merriam's Shrew	*Sorex merriami*	G5	S3			SS
Fringed Myotis	*Myotis thysanodes*	G5	S3			
Spotted Bat	*Euderma maculatum*	G4	S1		S	SS
Townsend's Big-eared Bat	*Corynorhinus townsendii*	G4	S2S3		S	SS
Pallid Bat	***Antrozous pallidus***	**G5**	**S1**		**S**	
Black-tailed Jack Rabbit	*Lepus californicus*	G5	S2S3			
Pygmy Rabbit	*Brachylagus idahoensis*	G4	**S3**		S	SS
Uinta Chipmunk	*Tamias umbrinus*	G5	**S3**			
Black-tailed Prairie Dog	*Cynomys ludovicianus*	G4	S3S4	C	S	SS
White-tailed Prairie Dog	*Cynomys leucurus*	G4	S1		S	SS
Great Basin Pocket Mouse	*Perognathus parvus*	G5	**S2**			
Hispid Pocket Mouse	*Chaetodipus hispidus*	G5	S1			
Northern Bog Lemming	*Synaptomys borealis*	G4	S2		S	SS
Meadow Jumping Mouse	*Zapus hudsonius*	G5	S2S3			SS
Gray Wolf	*Canis lupus*	G4	**S2S3**	E		
Swift Fox	*Vulpes velox*	G3	**S3**		S	SS
Grizzly Bear	*Ursus arctos horribilis*	G4T3	**S2S3**	T		
Fisher	*Martes pennanti*	G5	**S3**		S	SS
Black-footed Ferret	*Mustela nigripes*	G1	**S1**	E		
Western Spotted Skunk	***Spilogale gracilis***	**G5**	**S1**			**SS**
North American Wolverine	*Gulo gulo luscus*	G5T4	**S3**		S	SS
Lynx	*Lynx canadensis*	G5T	**S3**	T		
Woodland Caribou	*Rangifer tarandus caribou*	G5T4	SX			
American Bison (free ranging herds)	**Bos bison**	**G3**	**S2**			

Invertebrates- Mollusks

Common Name	*Scientific Name*	Global Rank	2000 State Rank	USFWS	USFS	BLM
Striate Disc	***Discus shimeki***	**G4**	**S1**			
Mission Range Disc	*Discus brunsoni*	G1	S1			
Marbled Jumping-slug	*Hemphillia danielsi*	G1G3	S1S3			
Spotted Slug	*Magnipelta mycophaga*	G2G3	S1S3			
Sheathed Slug	*Zacoleus idahoensis*	G3G4	S2S3			
Alpine Mountainsnail	*Oreohelix alpina*	G1	S1			
Bitterroot Mountainsnail	*Oreohelix amariradix*	G1G2	S1S2			
Keeled Mountainsnail	*Oreohelix carinifera*	G1	S1			
Carinate Mountainsnail	*Oreohelix elrodi*	G1	S1			
Berry's Mountainsnail	*Oreohelix strigosa berryi*	G5T2	S1S2			
Gallatin Mountainsnail	*Oreohelix yavapai mariae*	G4?T1	S1			
Russell Mantleslug	*Udosarx lyrata russelli*	G1	S1			
Rocky Mountain Duskysnail	*Lyogyrus greggi*	G3G4	S1			
Columbia Pebblesnail	*Fluminicola fuscus*	G2G3	SX			
Rocky Mountain Capshell	*Acroloxus coloradensis*	G?	S1			
Flathead Pondsnail	***Stagnicola elrodi***	**G1**	**S1**			
Largemouth Pondsnail	*Stagnicola elrodianus*	G1	S1			
Mountain Marshsnail	*Stagnicola montanensis*	G3	S1S3			
Shortface Lanx	*Fisherola nuttalli*	G2?	S1S3			
Large-mantle Physa	*Physa megalochlamys*	G3	S1			

Invertebrates- Insects

Common Name	*Scientific Name*	Global Rank	2000 State Rank	USFWS	USFS	BLM
Warm Spring Zaitzevian Riffle Beetle	***Zaitzevia thermae***	**G1**	**S1**	**C**		
Brown's Microcylloepus Riffle Beetle	*Microcylloepus browni*	G1	S1			
A Mayfly	*Caenis youngi*	G3	S2			
Powesheik Skipperling	***Oarisma powesheik***	**G2G3**			**S**	
Ottoe Skipper	***Hesperia ottoe***	**G3G4**	**S?**		**S**	
Tawny Crescent	*Phyciodes batesii*	G4	S2S3		S	
Gillette's Checkerspot	*Euphydryas gillettii*	G3	S3			
Eastern Ringtail	*Erpetogomphus designatus*	G5	S1			
Subarctic Darner	*Aeshna subarctica*	G5	S1S2			
Ringed Emerald	*Somatochlora albicincta*	G5	S1S3			
Brush-tipped Emerald	*Somatochlora walshii*	G5	S1S2			
Western Pondhawk	*Erythemis collocata*	G5	S1S2			
Boreal Whiteface	*Leucorrhinia borealis*	G5	S1			
Subarctic Bluet	*Coenagrion interrogatum*	G5	S1S2			
Last Best Place Damselfly	*Enallagma optimolocus*	G1G3Q	S1S3			
A Stonefly	*Isocapnia crinita*	G4	S2			
A Stonefly	*Isocapnia integra*	G4	S2			
A Stonefly	*Utacapnia columbiana*	G4	S2			
Meltwater Lednian Stonefly	*Lednia tumana*	G1	S1			
A Stonefly	*Zapada cordillera*	G3	S2			
Western Glacier Stonefly	*Zapada glacier*	G3	S1			
A Stonefly	*Isoperla petersoni*	G4	S2?			
Alexander's Rhyacophilan Caddisfly	*Rhyacophila alexanderi*	G2	S2			
A Caddisfly	*Rhyacophila ebria*	G1?	S1?			
A Rhyacophilan Caddisfly	*Rhyacophila newelli*	G2?	S2?			
A Rhyacophilan Caddisfly	*Rhyacophila glacieri*	G1	S1			
An Agapetus Caddisfly	*Agapetus montanus*	G2?	S2?			
An Amphipod	***Stygobromus montanensis***	**G1G2**	**S1S2**			
An Amphipod	***Stygobromus obscurus***	**G1G2**	**S1S2**			
An Amphipod	***Stygobromus puteanus***	**G1G2**	**S1S2**			
An Isopod	***Salmasellus steganothrix***	**G1G2**	**S1S2**			
A Phalangid	***Cryptobunus cavicolus***	**G1G2**	**S1S2**			
A Springtail	***Oncopodura cruciata***	**G1G2**	**S1S2**			

Species on Review

Fish

Common Name	*Scientific Name*	Global Rank	2001 State Rank	FWS Status	USFS Status	BLM Status
Shorthead Sculpin	*Cottus confusus*	G5	SU			
Brook Stickleback	*Culaea inconstans*	G5	SU			
Iowa Darter	*Etheostoma exile*	G5	SU			
Brassy Minnow	*Hybognathus hankinsoni*	*G5*	SU			
Plains Minnow	*Hybognathus placitus*	G5	SU			
Burbot	*Lota lota*	G5	SU		S	
Northern Red-bellied Dace	*Phoxinus eos*	G5	SU			
Pygmy Whitefish	*Prosopium coulteri*	G5	SU			
Creek Chub	*Semotilus atromaculatus*	G5	SU			

Reptiles

Common Name	*Scientific Name*	Global Rank	2001 State Rank	FWS Status	USFS Status	BLM Status
Pygmy Short-horned Lizard	*Phrynosoma douglasi*	G5	SU			
Short-horned Lizard	*Phrynosoma hernandesi*	G5	SU			
Common Garter Snake	*Thamnophis sirtalis*	G5	SU			

Amphibians

Common Name	*Scientific Name*	Global Rank	2001 State Rank	FWS Status	USFS Status	BLM Status
Great Basin Spadefoot	*Spea intermontana*	G5	SR			
Bullfrog	*Rana catesbeiana*	G5	SU			
Wood Frog	*Rana sylvatica*	G5	SR			
Plains Spadefoot	*Spea bombifrons*	G5	SU			
Canadian Toad	*Bufo hemiophrys*	G4	SRF			
Idaho Giant Salamander	*Dicamptodon aterrimus*	G3	SRF			

Birds

Common Name	*Scientific Name*	Global Rank	2001 State Rank	FWS Status	USFS Status	BLM Status
Clark's Grebe	*Aechmophorus clarkii*	G5	SU			
Great Blue Heron	*Ardea herodias*	G5	SU			
Black-necked Stilt	*Himantopus mexicanus*	G5	SU			
Wilson's Phalarope	*Phalaropus tricolor*	G5	SU			
Black-billed Cuckoo	*Coccyzus erythropthalmus*	G5	SU			
Eastern Screech-Owl	*Otus asio*	G5	SU			
Western Screech-Owl	*Otus kennicottii*	G5	SU			
Short-eared Owl	*Asio flammeus*	G5	SU			
Common Poorwill	*Phalaenoptilus nuttallii*	G5	SU			
Chimney Swift	*Chaetura pelagica*	G5	SU			
Williamson's Sapsucker	*Sphyrapicus thyroideus*	G5	SU			
Three-toed Woodpecker	*Picoides tridactylus*	G5	SU			SS
Cassin's Vireo	*Vireo cassinii*	G5	SU			
Plumbeous Vireo	*Vireo plumbeous*	G5	SU			
Sage Thrasher	*Oreoscoptes montanus*	G5	SU			
Tennessee Warbler	*Vermivora peregrina*	G5	SU			
Ovenbird	*Seiurus aurocapillus*	G5	SU			
Sage Sparrow	*Amphispiza belli*	G5	SU			SS
Bobolink	*Dolichonyx oryzivorus*	G5	SU			
Orchard Oriole	*Icterus spurius*	G5	SU			

Species on Review (cont'd)

Mammals

Common Name	*Scientific Name*	Global Rank	2001 State Rank	FWS Status	USFS Status	BLM Status
Northern Myotis	*Myotis septentrionalis*	G4	SU			
Eastern Red Bat	*Lasiurus borealis*	G5	SU			
Pygmy Shrew	*Sorex hoyi*	G5	SU			
Yuma Myotis	*Myotis yumanensis*	G5	SU			
Eastern Cottontail	*Sylvilagus floridanus*	G5	SU			

Invertebrates

Common Name	*Scientific Name*	Global Rank	2001 State Rank	FWS Status	USFS Status	BLM Status
Fir Pinwheel	*Radiodiscus abietum*	GU	SU			
Humped Coin	*Polygyrella polygyrella*	GU	SU			
Lyre Mantleslug	*Udosarx lyrata lyrata*	GU	SU			
Prairie Sprite	*Promenetus exacuous megas*	GU	SU			
Pacific Spiketail	*Cordulegaster dorsalis*	G5	SU			
Columbia Pebblesnail	*Fluminicola fuscus*	G2G3	SU			
Humped Coin	*Polygyrella polygyrella*	GU	SU			
Lyre Mantleslug	*Udosarx lyrata lyrata*	GU	SU			
Prairie Sprite	*Promenetus exacuous megas*	GU	SU			
Black Petaltail	*Tanypteryx hageni*	G3	SR			
Pacific Spiketail	*Cordulegaster dorsalis*	G5	SU			
Plains Clubtail	*Gomphus externus*	G5	SU			
Sinuous Snaketail	*Ophiogomphus occidentis*	G4	SU			
Canada Darner	*Aeshna canadensis*	G5	SU			
Lance-tipped Darner	*Aeshna constricta*	G5	SU			
Blue-eyed Darner	*Aeshna multicolor*	G5	SU			
Zigzag Darner	*Aeshna sitchensis*	G5	SU			
Black-tipped Darner	*Aeshna tuberculifera*	G4	SU			
Illinois River Cruiser	*Macromia illinoiensis*	G5	SR			
Ocellated Emerald	*Somatochlora minor*	G5	SU			
Bleached Skimmer	*Libellula composita*	G3	SR			
Hoary Skimmer	*Libellula nodisticta*	G3	SR			
Wandering Glider	*Pantala flavescens*	G5	SU			
Red-veined Meadowhawk	*Sympetrum madidum*	G4	SU			
Sweetflag Spreadwing	*Lestes forcipatus*	G5	SU			
Variable Dancer	*Argia fumipennis violacea*	G5T5	SU			
Paiute Dancer	*Argia alberta*	G4	SU			
Prairie Bluet	*Coenagrion angulatum*	G5	SU			
Familiar Bluet	*Enallagma civile*	G5	SU			
Alkali Bluet	*Enallagma clausum*	G5	SU			
Horned Clubtail	*Arigomphus cornutus*	G4	SU			
An amphipod	*Stygobromus sp 1*	G1G2	SU			

Species of Potential Concern

Birds

Common Name	Scientific Name	Global Rank	2001 State Rank	FWS	USFS	BLM
Horned Grebe	*Podiceps auritus*	G5	S4			
Swainson's Hawk	*Buteo swainsoni*	G5	S4			SS
Greater Sage-Grouse	*Centrocercus urophasianus*	G4	S4		S	SS
Long-billed Curlew	*Numenius americanus*	G5	S4			SS
Loggerhead Shrike	*Lanius ludovicianus*	G5	S4		S	
Brewer's Sparrow	*Spizella breweri*	G5	S4			
Grasshopper Sparrow	*Ammodramus savannarum*	G5	S4			
Lark Bunting	*Calamospiza melanocorys*	G5	S4			
McCown's Longspur	*Calcarius mccownii*	G5	S4			
Chestnut-collared Longspur	*Calcarius ornatus*	G5	S4			

Species Dropped from List

Common Name	Scientific Name	Global Rank	1999 State Rank
Tailed Frog	*Ascaphus truei*	G4	S4
Boreal Owl	*Aegolius funereus*	G5	S4
Bearmouth Mountainsnail	*Oreohelix sp 3**	G1G2	S1S2
Drummond Mountainsnail	*Oreohelix sp 4**	G1	S1
Brunson Mountainsnail	*Oreohelix sp 5**	G1G2	S1S2
Kintla Lake Mountainsnail	*Oreohelix sp 6**	G1	S1
Kitchen Creek Mountainsnail	*Oreohelix sp 7**	G1G2	S1S2
Missoula Mountainsnail	*Oreohelix sp 10**	G1G3	S1S3
Subcarinate Mountainsnail	*Oreohelix sp 11**	G1	S1
Byrne Resort Mountainsnail	*Oreohelix sp 31**	G1G2	S1S2
Washington Duskysnail	*Amnicola sp 2**	G1	S1

*MTNHP recommends these taxa, thought to be new but as yet undescribed in the scientific literature be dropped until they are documented in publication.

MONTANA ANIMAL SPECIES OF CONCERN
OBSERVATION FORM

Return form documenting sightings of animal species of special concern to:
Zoologist
Montana Natural Heritage Program
1515 East Sixth Avenue
Helena, MT 59620

Shaded area information required

General:
Common Name: _____
Scientific Name: _____
Observer(s): _____
Address: _____
Phone: _____
Date of submission (M/D/Y):_____

Locational Information:
County: _____Elevation (range if applicable):_____
Legal Description (TRS & quarter quarter): _____
or
UTM Zone:_____Northing:_____Easting:_____
Quad name(if known): _____

Observation data (Size, Condition, Landscape Context):
Date of observation (M/D/Y): _____
Number of individuals: _____ Age(s) and sex(es) (if known): _____
Reproductive evidence: _____
Additional comments regarding this observation: _____
_____
_____
_____
_____

Directions:
Driving and hiking directions to observation location (please provide a photocopy of map with location of the occurrence marked or outlined:) _____
_____
_____
_____
_____
_____

General Habitat Description: (predominant plant community, habitat description, etc.) _____

_____

_____

_____

_____

ASSOCIATED ANIMALS: _____

_____

Land Owner: _____

Owner comments (special requests, permissions, circumstances): _____

_____

_____

Additional Comments: _____

_____

_____

_____

_____

Photos: Y N **(If Y attach copy if possible)**

Specimens: Y N **Collection Numbers**: _____

Location of specimen _____

APPENDIX 3

NOXIOUS WEEDS OF MONTANA

Invasive non-native species are now one of the leading threats to the integrity of our nation's forests, grasslands, and waterways. However, the impact of non-native species on our economy and ecological systems is often not widely recognized. Source: County Noxious Weed Control Act State of Montana Department of Agriculture Helena, Montana.

Category 1 Noxious Weeds

Consists of weeds that are currently established and generally widespread in many counties of the state. Management criteria include awareness and education, containment and suppression of existing infestations, and prevention of new infestations. These weeds are capable of rapid spread and render land unfit or greatly limit beneficial uses.

Canada thistle (*Cirsium arvense*)
Russian knapweed (*Centaurea repens*)
Spotted knapweed (*Centaurea maculosa*)
Diffuse knapweed (*Centaurea diffusa*)
Dalmatian toadflax (*Linaria dalmatica*)
Field bindweed (*Convolvulus arvensis*)
St. Johnswort (*Hypericum perforatum*)
Sulfur (erect) cinquefoil (*Potentilla recta*)
Whitetop or Hoary cress (*Cardaria draba*)
Leafy spurge (*Euphorbia esula*)
Common Tansy (Tanacetum vulgare)
Ox-eye Daisy (Chrysanthemum leucanthemum L.)
Houndstounge (Cynoglossum officinale L.)

Category 2 Noxious Weeds

Consists of weeds that have recently been introduced into the state or are rapidly spreading from their current infestation sites. These weeds are capable of rapid spread and invasion of lands,
rendering lands unfit for beneficial uses. Management criteria include awareness and education, monitoring and containment of known infestations, and eradication where possible.

Purple loosestrife or lythrum (*Lythrum salicaria, L. virgatum*, and any hybrid crosses)
Dyers woad (*Isatis tinctoria*)
Tansy Ragwort (Senecio jacobea L.)
Meadow Hawkweed Complex (Hieracium prantense, H.)
Orange Hawkweed (Hieracium aurantiacum L)
Tamarisk “Salt cedar” (Tamarix spp.)

Category 3 Noxious Weeds

Consists of weeds that have not been detected in the state or may be found only in small, scattered, localized infestations. Management criteria include awareness and education, early
detection, and immediate action to eradicate infestations. These weeds are known pests in nearby states and are capable of rapid spread, rendering land unfit for beneficial uses.

Yellow starthistle (*Centaurea solstitialis*)
Common crupina (*Crupina vulgaris*)
Rush skeletonweed (*Chondrilla juncea*

Appendix 4

Sources of Written and Oral Comments on the Draft EIS, March/April/May 2003. Please send an e-mail to request a copy of this Appendix.

fwpwolfmgmt@mt.gov

APPENDIX 5

FWP RESPONSES TO PUBLIC COMMENTS AND REPRESENTATIVE COMMENTS

Summary of Public Involvement on the Draft EIS

Background

In March 2003, FWP began accepting comments on the Draft EIS with the proposed action that the "State of Montana will develop and implement a wolf conservation and management program." The Updated Council Alternative was identified as FWP's preferred. FWP designed a 60-day public comment period to ensure wider opportunity and more time for the public to participate. FWP conducted 14 Community Work Sessions across Montana from March 27-May 1, 2003 in which the public was invited to provide oral comments. FWP also provided opportunities for the public to provide written comments on line via the FWP website, in addition to sending letters or postcards via postal mail and FAX. The comment period closed on May 12, 2003.

During this public comment period, FWP asked the public to be more specific in their feedback to FWP. They were asked to identify which alternative/s best addressed their concerns about the future of wolf conservation and management in Montana and why. FWP also asked them to identify what, if anything, they would modify about the alternative so that it better addressed their concerns. FWP prepared pre-printed post cards with these questions and made them available at all the Community Work Sessions as well as all the FWP Regional Headquarters offices. The FWP website also offered an identical format with the same two questions. To that end, many of the comments below will appear in two parts with a #1 and #2 in the text. The reader is reminded to keep this in mind while reviewing the comments below; otherwise the context may be lost.

About 500 people attended the Community Work Sessions (478 actually signed in), compared to about 800 during the issue scoping work sessions in 2002. It seemed that only 30-50% of these attending in 2003 had attended during 2002. Work session participants were able to learn more about the issues and alternatives during an open house immediately prior to the comment session and during an opening set of remarks by FWP in which the alternatives were described and attendees could follow along and take notes on a handout. A total of 1,595 comments were recorded during the sessions (compared to 2722 in 2002). The total number of written letters and emails received was also fewer than in 2002.

How the Comments were Processed

Comments received during the work sessions (in 2002 and 2003, respectively) were entered into a date file as they were written down that night on the flip charts or as the attendee wrote them on a pre-printed comment card. Spelling and grammar were corrected upon entry into the computer database. Each comment was assigned a unique record number through the "auto number" function in Access.

Upon receipt, each comment letter or postcard received via postal mail or FAX was assigned a unique number manually using a traditional stamp and inkpad system.

Because of the high volume of emails received during the 2002 scoping comment period, FWP contracted with an independent provider for the receipt and data storage of all emails received through the FWP website. The raw data file was transferred to FWP for all processing at the close of the comment period. Email comments were transferred to their own data file in Access and numbered using the "auto number" function. Emails received by FWP personnel directly and independent of the contractor were processed with the written letters received via postal mail.

All comments were read by one person and most were read by two people. Because FWP asked for feedback specifically about the alternatives, all the comments were generally more complicated and detailed than those received during issue scoping. In addition, the comments often referenced more than one alternative and many different issues.

Each comment was assigned to a key word category (i.e. each alternative and the same issue categories as used during scoping) by only one person. This assignment was also incorporated into the comment database files. This allowed broadly defined grouped of comments to be summarized, catalogued, and considered together systematically. It also allowed issues to be ranked according to the frequency with which they were mentioned. Because key word summaries represent issues/concerns mentioned in each public comment/letter/postcard and each individual comment may have had more than one issue or alternative mentioned, the summary statistics presented by key word alternatives / issue categories will represent some duplication. In other words, the total number of emails, letters, flip chart comments, and postcards will be smaller than the total number of comments (or statements) processed according to the key word categories (alternatives and issues).

Many comments were general and did not mention a specific alternative. Many seemed as if the individual was not familiar with what FWP was proposing in the preferred alternative. The expressed preferences or sentiments of many of these comments are consistent with the preferred alternative.

This appendix presents a short summary of the comments on the alternatives and all of the key issues, followed by FWP's response to the substantive issues raised by the public. FWP received many comments that were similar or repetitive in that they raise the same issues. Because of the significant degree of overlap between comments on the alternatives and general comments on the issues, most of FWP's responses are presented under the key issues instead of the alternatives. If FWP didn't respond to a comment under the respective alternative, the reader should look under the issue for a more specific and exhaustive response. FWP received a significant number of comments on the Draft EIS. Therefore, only a representative sample is included in this appendix. The project file contains a complete record of all comments received by FWP.

Summary of Pubic Comments on the Alternatives and FWP's Response

Alternative 1, No Action

Summary of Comments: Most comments supporting this alternative indicate that it's premature to delist wolves and that USFWS hasn't satisfied ESA requirements to recover wolves. Many reference an unfavorable political climate in Montana (i.e. recent wolf-related discussions and actions taken by Montana's 2003 Legislature and county commissions). Some comments also cite "anti-wolf rhetoric" from some elected officials and the public and suggest that attitudes need to change before states can be allowed to take over management. Furthermore, some comments indicate either a lack of trust in FWP's stated intentions to maintain a recovered population or a lack of confidence in FWP's training and ability to manage wolves. Still other comments indicate a lack of support for this alternative based on a desire to end USFWS's continued involvement with wolf recovery and management in Montana and a belief that the time has arrived to delist wolves and transfer management authority to the State of Montana.

A smaller number of comments supported this alternative because it "saddles" the USFWS with the "burden" of managing wolves over the long term. These comments do not support FWP assuming management authority and urge the continuation of federal management.

Response: Whether or not USFWS has satisfied ESA requirements is beyond the scope of this EIS and FWP's authority. FWP believes, however, that USFWS has met its requirements and that wolves are biologically recovered. The federal recovery requirements call for a total of 30 breeding pairs for three consecutive years in the three recovery areas combined. A breeding pair is defined for the purposes of recovery as an adult male and an adult female with at least two pups on December 31. Under this alternative in which the FWP would not adopt and implement a state wolf program, the federal government would stay involved because ESA is a federal statute and the gray wolf is a federally protected species. USFWS is the federal agency responsible for carrying out ESA mandates.

FWP is prepared to assume management responsibility because wolves are now a part of Montana's landscape and will continue to inhabit Montana. FWP is the appropriate state agency to manage resident wildlife. FWP concedes its lack of direct experience with wolf management. FWP, however, has managed other wildlife in the presence of wolves for many years. FWP has gained additional experience through cooperative involvement in ongoing wolf-ungulate studies, the Northern Yellowstone Working Group, and through this planning process. FWP regrets that some are skeptical about its intentions and goals for wolf conservation and management in Montana. FWP also regrets that wolf conservation and

management is such a controversial issue. FWP hopes to show that, through balanced and responsive implementation, there is more to gain through good faith cooperation among all interested parties than through political divisiveness. By responding and resolving conflicts while meeting the ecological requirements of gray wolves, FWP has made the commitment to fulfill its legal requirements to maintain a secure, recovered population. Upon delisting, Montana's state laws will provide legal protection for wolves as a "species in need of management." The FWP Commission will approve the necessary administrative rules. The Montana Legislature will establish the penalties for illegal activities.

One comment supports this alternative and states that the breeding pair benchmark of the other alternatives is arbitrary and capricious. The No Action alternative is the continuation of the federal recovery program. Wolf numbers in that alternative are as per recovery criteria established in the original wolf recovery plan and projections published in the Yellowstone Reintroduction EIS. The number of wolf pairs in the Minimum Wolf Alternative is based on the premise that Montana would maintain its minimum commitment (or 10 breeding pairs) to the tri-state total of 30. The 15 breeding pairs in the Updated Council Alternative is based on the recommendations of the Interagency Technical Committee that served the Montana Wolf Management Advisory Council during its deliberations. The Technical Committee also consulted with other wolf experts. Their recommendation was based on the premise that 15 breeding pairs would be a minimum for a viable population that would still allow management flexibility and implementation of most tools being considered by the Council. FWP, in response to public comment, wanted to include and analyze an alternative that called for "more" wolves and choose to present one with 20 breeding pairs as the adaptive management benchmark. FWP arbitrarily selected 20, but could've just as easily analyzed 17, 25 or 100. A total of 20 pairs was five more than the preferred alternative and twice as many as the Minimum Wolf Alternative.

Another comment expresses concern about how FWP will address the public's fear and resulting hostility towards wolves and that the wolf program should stay with the federal officials because state officials may not be able to address it adequately. The preferred alternative outlined the need for and described FWP's commitment to an active information/education component. Through public outreach, FWP hopes that public hostility towards wolves will transition to acceptance.

Representative Comments:

W386: Say no to alternative #1 (group agreed)

W1235: Don't want fed government involved. No trust. Don't like alternatives that have federal involvement

W69: Alternative #1, No Action. Do not delist. The wolf is not sufficiently recovered to begin managing them as a furbearing animal.

W94: Alternative #1 – wolves have not recovered and removal from threatened and endangered list is premature.

L0022: Under no circumstances should alternative #1 be allowed.

L0035: Until such time as wolves occupy more of their original territory in greater numbers, FWP should not adopt a management plan. No Action!

L0036. Only "no action" appears to satisfy the basic legal and biological requirements of ESA. Any action alternative should adopt the principles of sound conservation biology. FWP should not adopt a wolf conservation and management program until these minimum standards have been met.

L0037: USFWS has spent millions to establish these wolves in Montana, and now that the wolf population is multiplying rapidly, they want to dump this mess on Montana. FWP proposes to accept this responsibility and this should be refused for the following reasons. 1. Money. Montana does not have $800,000 to spend on wolf management and it certainly won't have the ever-increasing money needed as these wolves increase. Managing these wolves is not a Montana responsibility – it's a federal responsibility

L0045: After reading the draft, I am more than ever convinced that the USFWS should not delist the wolf. The wolf has not been sufficiently recovered to delist and turn management over to the states. I have no confidence that wolves will be protected or further restored once federal protections are removed.

L0092: The gray wolf should not be delisted. Their recovery is not sufficient. Delisting at this time would put the state legislatures on the starting blocks to completely eliminate wolves.

L0125: The title of the plan implies that wolves are to be maintained in the state of Montana and not allowed to become endangered. But it seems that several counties have already voted wolves to be "unacceptable" in their counties. We have a lot of fear that if wolf management is turned over to the states, wolves will soon be eradicated as they have been in the past.

L0188: The removal of federal protection for the wolf is premature at this time. In Montana, there is significant hostility and fear directed at this species. The local governments of Phillips and Fergus counties have stated that "wolves constitute a menace to society that cannot be tolerated. Dan Fuchs sponsored house bill 283. If this is an example of what the wolves will have to deal with in the struggle to survive, it appears that FWP hasn't

done the necessary public outreach to assure that when the wolves are delisted they aren't slaughtered and have to be relisted again. FWP revenue is directly linked to sale of hunting licenses. Since wolf recovery depends on prey species, FWP would be pressured by hunting interests to aggressively manage. While I think that the State of Montana should be permitted to manage the wolf along with other wildlife species, the draft EIS suggests that they cannot be trusted with that responsibility at this time.

L0205: Alternative 1 keeps the wolf listed – which is not good.

L0315: I strongly support alternative 1. I strenuously object to turning over de facto control of the wolf population to the likes of legislators. Those in Idaho and Wyoming are on record in favor of slaughter on sight. Those in Montana differ only in that thy have better control over their tongues than their colleagues in Boise and Cheyenne. Therefore, I prefer alternative 1, leaving the management unchanged on the theory that a change to proactive/somewhat more pro-wolf management attitudes would occur.

L0080: Alternative 1 because the breeding pair benchmark set in the other alternatives is arbitrary and capricious.

E29: I think what scares me the most about taking the wolf off the endangered species list is that the public WILL NOT pay attention to the fact that they are still under management and that they will look at it as an OPEN HUNTING SEASON.

E51: I do not think the state of Montana can be trusted to manage the wolves in a manner that will provide any protection to the wolves at all. Rather the protection safety needs or value of the wolves would almost assuredly run a distant LAST in any and all instances where a decision between wolves or cattle ranchers would need to be made. Montana state elected and appointed officials do NOT have a good track record in their concern for wildlife or wilderness or anything concerning environmental issues in general. Nor do they respect the will of the people unless it supports what they intend to do anyway. So even though public support for the protection of wolves has been shown to exist, it would have little or not impact on actions the state would not doubt take to jeopardize the wolves' existence.

E70: No action. Wolves should remain on the Endangered species list until their populations are truly stable. Wolves continue to be killed on a regular basis and sometimes entire packs at a time. At this rate, if the wolves do not have the protection of the ESA, the entire population will be destroyed again. When there is no longer the stigma of a huge fine and possible jail time for killing wolves, wolves will be in much greater danger than they are now. None of the western states where wolves have been reintroduced have shown their interest, ability, or integrity to take on the management of wolves in their state.

Alternative 2, Updated Council, FWP Preferred

Summary of Comments: This alternative, based on the work of the Montana Wolf Management Advisory Council, is FWP's preferred alternative. It generated the greatest number of comments compared to the other alternatives. Overall, comments show support across a diversity of interests and locales in Montana. It is seen by many as balanced and fair to all stakeholders. Many comments, however, do show an inclination towards other alternatives (generally Alternatives 3 and 4) but also state a willingness to accept #2. Many comments acknowledge the need for management flexibility and the importance of FWP responding to local concerns. Comments opposing this alternative frequently mention support for one of the other alternatives.

Many comments suggest modifying the Updated Council Alternative. A change in the number of breeding pairs is frequently mentioned. Suggested changes are to drop the breeding pair standard from 15 to 12, 13, or even to 10 as presented in Alternative 4, or, conversely, to raise the standard from 15 to 20 or 30 breeding pairs. Reasons given for the change are that 15 is either "too high" or "too low". Another suggested change calls for FWP to establish a "zone" to limit wolf distribution to western Montana, similar to that described in Alternative 4. There is a localized concern that there could be plans to reintroduce wolves to the Missouri River National Monument and the Charlie Russell National Wildlife Refuge in the central prairie region of Montana.

Another proposed change is the source of the funding for the program – many comments desire to see the program supported by 100% federal funding, with no state or private contribution. Others comments say that the state should put revenue collected through the regulated harvest program back into the wolf program. Others highlight a concern that funding sources (whether public or private) are apt to have "strings" attached which might unacceptably constrain the program.

FWP also received comments opposing this alternative. One subset does not support FWP assuming management responsibility. Another subset does not support it because it is "too liberal" or favorable towards wolves. FWP also received comments that the Draft EIS is too general and vague and that the preferred alternative does not provide enough detail for reviewers to provide meaningful comments.

Response: The USFWS has determined, and others agree, that the gray wolf population of the northern Rockies has met the recovery goal and can be delisted, with management authority being transferred to the respective states where wolves

reside. FWP is prepared to assume management responsibility because wolves are now a part of Montana's landscape and will continue to inhabit Montana. FWP is the appropriate state agency to manage resident wildlife.
FWP and Montana citizens are concerned that if the wolf remains on the endangered species list, federal agencies – or the federal court system could independently determine Montana's wolf management program without addressing the sentiments of the people of Montana. By developing and adopting a state wolf conservation and management plan along with adequate regulations (and in conjunction with similar plans and regulations in Idaho and Wyoming), USFWS will delist the wolf from ESA. A state-run program of an officially recovered population will be far more flexible, adaptable, and responsive to the diverse needs and expectations of Montanans and its visitors. FWP explicitly states its commitment to maintaining Montana's portion of the recovered wolf population in the northern Rockies, recognizing the gray wolf as a native species, and integrating wolves into Montana's wildlife heritage. The reader is referred to later sections of this appendix for additional information on FWP's responses to comments on specific issues as they relate to this alternative.

Because the people of Montana have a significant stake in the future management of wolves, they were provided an opportunity to deliberate issues related to wolf recovery and management. Former Governor Marc Racicot appointed the Montana Management Advisory Council to advise FWP regarding wolf management. FWP expanded the opportunity for everyone to participate through the development of this EIS. The preferred alternative that emerged from the Council's work and the input that FWP received through the public comment opportunities reflects the public's desire for FWP to conserve and manage wolves in a way that addresses their concerns and allows FWP the flexibility to meet the needs of both wolves and people. It also reflects Montanan's willingness to work together to build a successful program.

Most importantly, the adaptive management framework described in the preferred alternative allows FWP to adjust management to accommodate Montana's highly variable landownership patterns, highly variable levels of social tolerance in time and space, differing land uses, and differences in wildlife habitats and prey species distribution. While FWP is aware of the criticism that this alternative is too vague, the wide variety of habitats suitable for wolf occupancy, and the variation across the physical, human and political landscapes of Montana make it such that a cookie-cutter approach to wolf management would not be practical nor effective because one set of management tools will not be appropriate everywhere and in all circumstances. When the number of breeding pairs is greater than 15 pairs, liberal tools such as special kill permits for problem wolves or regulated harvest become available. FWP has more flexibility in resolving wolf-livestock conflicts that may include lethal control techniques when wolf numbers are higher, and particularly on private lands. If the number of breeding pairs is 15 or less, FWP would select more conservative management tools, particularly on public lands. Examples are discontinuing regulated harvest opportunities or being very conservative in the number of special kill permits are issued in lieu of concerns for the security of the population to maintain itself. FWP believes that a minimum of 15 breeding pairs is required prior to using liberal management tools because FWP does not want to jeopardize the security of the population. The additional breeding pairs above the minimum required will provide FWP the flexibility to manage in ways most responsive to local concerns without risking a need to relist the species under ESA.

Several comments point out that this alternative does not have an upper limit to the wolf population, nor is wolf distribution zoned. FWP clarifies that the benchmark of 15 breeding pairs in the preferred alternative does not function as a population "cap" in that the population would be limited to being only 15 breeding pairs in size. The benchmark serves as a signal to managers that an adjustment in management decisions should be made, either in the more liberal or conservative direction. A more objective basis for decision-making is established by using a benchmark signal. The impacts analysis of this alternative indicates that there would be more than 15 breeding pairs present in Montana in 2015 if all the predictive assumptions are valid and the population performs as FWP assumed it would in response to implementation of the specific conservation and management tools. The preferred alternative seeks a balance between the biological needs of wolves and the concerns of people. The adaptive framework allows FWP to conserve and manage wolves within the context of human social tolerance, wolf ecology, and Montana's requirement to sustain a recovered population by letting wolves find their place on the landscape. FWP considered capping wolf numbers and zoning wolf distribution in Alternative 4 and agrees with the recommendations of the Advisory Council that it would not only be unrealistic to manage for a maximum number of wolves in Montana, but that to do so would be inconsistent with how other wildlife in Montana are managed. In addition, the intermingled landownership patterns and land uses, in light of the ability of a wolf to travel long distances even in a single day, make it impractical to "zone" wolf distribution based on distinctions between public and private lands or certain land use or ownership patterns.

Several comments mention the need to more strictly regulate the ownership of captive wolves and wolf-dog hybrids. See the Hybrids section below.

Some comments question the role of USDA Wildlife Services and whether it was possible to discontinue its involvement with wolf conservation and management in Montana. Montana statutes charge both FWP and Montana Department of Livestock (MDOL) with resolving conflicts and damages to private property caused by wildlife. Therefore, MDOL will be involved in wolf management in Montana either directly or indirectly. Damages caused by other large carnivores (e.g. mountain lion, black bear) are presently handled by USDA WS through a Memorandum of Understanding between FWP and MDOL. The preferred alternative would have FWP contract WS to address wolf-conflicts through MDOL in lieu of FWP personnel.

Some comments express concern over the provisions that wolves in Montana could be hunted or trapped at some time in the future. The preferred alternative describes that wolves will be reclassified under state statute as a "species in need of management" upon delisting. When is becomes biologically appropriate to do so, FWP and the FWP Commission will consider reclassifying the gray wolf as a big game animal or a furbearer and establish regulations by which licensed members of the public could harvest a wolf. Harvest programs would be managed in a biologically sustainable manner and will not jeopardize the population. Early on, FWP will be conservative, ensuring that implementation of the other aspects of its wolf conservation and management program is going smoothly and that other mortality sources are not excessive, causing the population to require ESA protections in the future.

One comment notes the appropriateness of recognizing Indian tribes' authority on the seven reservations in Montana. Tribal authorities will determine wolf management on reservations. Managing wildlife populations that range across jurisdictional boundaries is always challenging. In the case of a wide ranging species such as the gray wolf, FWP will coordinate with other agencies and tribes to resolve any concerns about how cross boundary packs would be managed or how conflicts would be resolved to make sure that national park, provincial, tribal, as well as individual state, and tri-state goals are met.

One comment states that the preferred alternative does not provide enough detail on what protections would be afforded to wolves under the state classification as a "species in need of management." FWP clarifies that it has the authority, in conjunction with the FWP Commission to undertake administrative rule-making to establish those regulations. Typically, FWP prepares a management plan first and then adopts the administrative rules consistent with the plan. The preferred alternative confirms that FWP would seek state legislation to make the unlawful taking of a gray wolf a misdemeanor under MCA 87-1-102. FWP would also see legislation to include the gray wolf under the restitution sections of MCA 87-1-111. FWP confirms that the adoption of penalties and fines under Montana law, in addition to FWP Commission rules is consistent with the Council's recommendation that law enforcement be a high priority, that illegal activity be discouraged, and that penalties be similar to unlawful activities for black bears and mountain lions.

Representative Comments:

W4: Alternative 2 is realistic.

W14: 1. #2 – gives FWP broader range of management choices. 2. This program be totally funded by the federal government.

W83: Alternative #2 – like to see flexible tools defined. When can they implement which tools? Should be defined in the final plan.

W157: Alternatives #2 has hunting and trapping – is that a reality? And if not due to outside pressure, will there be a special state kill permit that is protected from such pressure?

W84: Implement alternative #5 in the interim. Then go to alternative #2 after delisting.

W352: Under alternative #2, take out section on private/public funding and make it federal funding.

W359: Because 10 offers less flexibility, use 12. Like alternative 2.

W488: I like alternative 2, but it's a little more liberal than I would like. The reason I like it better than 4 is because I don't want it back on the list. It's important to deal with local problems, like a kill permit for the landowner.

W537: I like alternative 2. I like the idea that Montana will be running the show rather than the feds dictating. I like giving stockowners the tools to handle problems.

W564: As a livestock producer, I like alternative 2 because there is compensation, landowner flexibility to protect livestock and the fact it provides for regulated harvest.

W598: Concern that alternative 2 has no upper limit.

W812: Zone approach would be better than a #'s approach on alternative 2.

W826: I like alternative #3 the best with the addition of compensation plan. But I think #2 is most reasonable because it balances the need of having wolves in Montana and the landowner and livestock owners' needs.

W993: I don't want #5 to be our long-term objective, but we would like to see it until we can get #2 in action.

W994: I would support something between #2 and #4 – do we need 15 or 10 as a benchmark?

W996: I like alternative 2 – I don't like 20 pairs. I think 20 is pushing it.

W1302: money is my biggest concern. Alternative 2 is fine.

W1328: must have an alternative for everyone. Agriculture community could live with alternative 2. But add zones as in alternative #4. Manage migrating wolves more aggressively. Must delist first.

W1346: Alternative #2 with 20 pairs or Alternative #3 with compensation. Need to deal with hybrids.

W1438: Prefer #4, like idea of protecting private property. Concerned could get relisted under this option. Therefore would prefer #2.

W9: I like alternative #2, but FWP should take over before delisting if litigation takes time.

W13: #2 – but how many wolves do we actually need?

W21: Alternative 2. I am looking for FWP to manage wolf just like other wildlife. I am looking for management based on science, not politics. If one of the states fails to meet the plan request then our plan #5.

W54: Alternative #2 will get the wolf delisted and they will need to be managed and compensation must be made to ranchers, packers and others who suffer financially for losses due to wolf kill of cattle and wildlife. Why need the federal officials respond to livestock conflicts? Is there no way to get the federal government out of the project?

W62: Alternative seems to address the concerns of all sides. There would be about the same amount of wolves as now and compensation is possible for stock growers. In the mean time, alternative 5 would work. I would like to see more wolves in alternative #2 – increase to 20.

W121. alternative #2 with 10 pair. Feds should pay all the costs – they put the wolf here.

L0022. The appropriate action is to implement alternative #4. This will be in the best interest of our state's citizens. If this cannot be done, then alternative #2 is acceptable.

L0023: I would prefer you choose option #3 and I actually hope you expand the breeding pairs allowable. My second choice would be the alternative now preferred by you, option #2. I am adamantly opposed to both options #1 and #4.

L0070. The first major flaw I see is in setting the management benchmark at 15 breeding pairs. In light of the estimate that there are currently 14 breeding pairs in Montana, this allows for little growth before heavy-handed management can step in to remove, kill, and rearrange. This also implies that the number is based on pacifying special interest groups like ranchers and hunters, rather than allowing growth when the ecosystems of Montana can surely support more than this number as in #3. The second serious problem that I find with the preferred alternative is that it does not outline appropriate ways to handle the concerns of ranchers and livestock depredation. Emphasis needs to be placed on preventative measures, such as electric fences or guard animals, rather than management when an incident happens. The final part of the preferred alternative that I feel will not ensure the long-term success of wolves in Montana is the provision that will allow wolves to be hunted when they reach sustainable levels. With all of the work and money that has gone into reintroduction wolves and making sure they are successful, this seems like a giant step backwards.

L0094: We realize that it is critical that we get the wolf delisted and feel you can do this under alternative #2 with this exception: you establish a zone for the wolf population. Give landowners more flexibility in central and eastern zones. We have enclosed a map with our zone on it. We feel that you can obtain your goal of actively managing wolves west of the line we have drawn on the map. Wolves should not be allowed to establish themselves east of this line. A much more stringent management plan should be in place for breeding pairs that migrate.

L0133: I am saddened by the proposed alternative. I honestly believe the document to be flawed, with the preferred alternative counter to Montana's game management objectives. Predation on big game populations is the greatest concern I have on the liberal approach to wolf management. The preferred alternative is costly, liberal in favor of the wolf, requires excessive government intervention and will have high negative impact on game resources in the state. My hope is that FWP will revisit the plan and write it in favor of protection of the wonderful game sources we currently have in Montana.

L0151: It is clear to me that FWP has thoughtfully attempted to balance the contentious issues surrounding support for a viable population of wolves, conflicts with livestock, human safety, and long term funding for wolf management. I am impressed with the comprehensive nature of the preferred alternative. In particular, the long-range objective of building public support so as to preclude the need for either artificially capping wolf numbers or define their distribution throughout the state is greatly appreciated. Willingness to allow wolves to strike their equilibrium with the system reflects the progressive nature of this alternative. Whether 15, 20, or 100 breeding pairs are used as the trigger point for toggling management actions, that trigger will only be as good as the FWP commitment to advocate on behalf of the species. Given the national interest surrounding gray wolves, I believe it is

entirely appropriate for the federal government to continue to provide financial support for Montana's wolf program after delisting. This support should continue for as long as it is needed to properly manage wolves in the state.

L0162: Alternative #2. It seems to best address the concerns of those both for and against the wolves in the wild. I'm very much impressed with the thought, research and dedication that have been applied to all of the alternatives. I would like to see specific penalties for those who would randomly destroy wolves. Also a plan for public education regarding wolves would be wonderful. Ranchers need to know alternative ways to protect their stock (besides use of firearms). Outfitters and hikers need to know how to best protect themselves in the event of wolf/human confrontation and how best to avoid conflicts with wolves.

L0176: My preference is plan #3, second choice plan #2. Compensation programs, however they are funded, should not become a permanent entitlement or worse, a way of buying off livestock producers and assuaging the conscience of "pro-wolf" advocates. It inappropriately sets wolves in a "special" category from other predators and other losses due to wildlife. It perpetuates the cartoon characterization of wolves by "excusing" their natural behavior with monetary compensation for the behavior. It bribes and demeans ranchers. The presence of wolves on the landscape reduces, like many other factors (weather, beef prices) the degree of control a rancher can exert over his livelihood. Incorporate compensation in the management plan ONLY under a sunset clause where it is understood that the compensation will either end on a set date OR continue only if the program is funded adequately through a bi-partisan sources (not JUST the wolf huggers). Any compensation program should seek to draw funds from the most diverse possible sources, including the meat and agriculture industry. If there is strict sunset provision (say 5 years and then compensation ends) it puts ranchers on notice that they have a reasonable time to make adjustments to the new reality of wolves on the landscape and it financially bridges that adjustment time. The compensation fund should also financially support education and innovation in regards to new approaches to managing livestock in an environment that includes wolves. Incentives for those ranchers willing to struggle with the adjustments necessary should be more important than paying off ranchers for affects of predation. Compensation should only apply to predation losses suffered on private property. This sends an appropriate message of support for the sanctity of private property and at the same time, signals that those who use public land accept certain caveats along with that usage. Only hunting, not trapping, should be allowed as a proactive management tool for culling wolves. Trapping is not only very difficult to defend in terms of the perceived brutality but it does little to condition wolves in ways that benefit wolves and humans. Wolf hunts should be conducted under strict regulations based on best science and in such a way as to do the least damage to pack social structure. Wolf hunts should only be guided commercial hunts, conducted with an outfitter who has been trained and certified by FWP. FWP would designate those animals available within pack structure that may be taken and outfitters would be certified and trained to select those animals for their hunter clients.

L0183: Urge the following improvements in the preferred alternative: increase to 20 the breeding packs. This would provide an extra safety margin between endangered versus liberally controlled and hunted, which is especially important since Montana harbors all the of the northwestern Montana recovery area population plus part of the Greater Yellowstone population and perhaps even one of more wolf packs associated with the central Idaho population – each of which must be managed in excess of ten breeding pairs to ensure long term wolf viability: until minimum wolf recovery goals are at least doubled and 20 breeding pairs are achieved in Montana, private citizens should not be allowed to kill a wolf unless it poses an immediate threat to human life or livestock. We oppose the issuance of kill permits that do not specifically target offending wolves only. Similarly we oppose hunting and trapping of a wolf population below at least 20 breeding pairs that is not selective against specific depredating wolves.

L0184: I agree that the preferred alternative with the adaptive management concept is an appropriate management direction for Montana. It is appropriate to recognize the tribes' authority on the seven reservations in Montana but it also raises a question about the adaptive management concept. Since the tribes have wolf conservation and management responsibilities on the reservations, does FWP intend to count wolf packs that occur on reservations when tallying numbers that signal changes in adaptive management strategies? If wolves are no longer protected by federal regulations a tribe could conceivable adopt any management strategy it chooses on its reservation. Tribes may choose a management strategy far less conservative than that indicated by the state's adaptive management process. It may be necessary to negotiate formal agreements with Indian tribes to coordinate monitoring, management and regulated harvest of wolves to ensure the effectiveness of a stateside management strategy.

L0206: Alternative #2 will not only insure the future of wolves in Montana, but also protect user groups with interest that may conflict with wolves, from undue harm. Budget for managing wolves is unrealistically high. We would like to know what FWP plans to do if money cannot be obtained from private or federal sources. The inadvisability of private hybrid and wolf ownership through regulatory means if problems involving these animals running loose continue. Uncomfortable with compensating livestock owners for depredations. They are not compensated for deaths caused by other predators. Should be linked to owners who employ proper husbandry practices.

L0254: Alternative 2 is fundamentally flawed for the following reasons. If fails to make clear what protections would be afforded to wolves under state classification as a "species in need of management" and how these protections differ from those provided under ESA.

L0341: Alternative #2. Needs provision in the plan to address wolf control for those counties that do not use Wildlife Services.

L0344: We support alternative #2 because it gives the sate control, provides compensation, allows for hunting, trapping and gives landowners flexibility. Also it is very important that wolf numbers and management takes into account moose, elk, deer and antelope numbers. We feel alternative #5 should be pursued in the interim. Changes we should like to see are compensation for all pets killed by wolves whether it is a horse, dog, cat etc. But particularly for working stock dogs. Should be funded from general fund, as well as other public and private sources.

L0345: strongly urge and request that a program of compensation for the public loss of a public resource, wildlife be developed to match the compensation program for private livestock losses. This could be increased access, improved habitat and more FWP law enforcement and field biologist staff.

L0100: Alternative, leaning towards alternative #3. Because of the 20 pack # would allow landowners/ranchers more flexibility in dealing with wolves versus compensation, which doesn't seem like a sustainable solution. I also like the possibilities of hunting, any way the public becomes more a part of the process, the more successful the wolf program will be.

L0106: #2 – it is "balanced" with enough flexibility to work. Most important not to get to the point that wolves would have to be relisted. Cost of the program – it should be 90% federal money and 10% state and private. I am concerned about the protection of livestock and dogs (all dogs). For instance hunting hounds. All people should have the right to protect their animals, no matter where they are.

L0142. The preferred, as described is positive. The bigger question in my mind continues to be "is there a place in Montana in today's society for introduced wolves?" From my perspective with all the impacts of this animal considered, I say no.

L0248: Alternative #2 seems to be the most likely of the acceptable alternative o remove wolves from the endangered species list so would be the alternative that MFBF supports.

E54. I can live with alternative #2, the choice of FWP. However, it will be criminal if one cent of FWP revenue obtained from hunters is used to manage wolves. The people of the whole US are the ones who decided to import wolves at a high cost to those same taxpayers. These same people should foot the bill. The alternative should clearly state that the federal government would pay for all costs.

L0331: Alternative 2 includes some favorable components such as enhanced ecological research, interagency and tribal coordination and monitoring. However we oppose the liberalized lethal control and hunting of wolves as identified and described in this alternative. In particular we believe proactive removal of potential problem wolves places the wolf population in jeopardy by killing wolves before there is any evidence of depredation or any attempts to prevent depredations. It is our belief and experience that working with a stable wolf pack can be more predictable and thus management to reduce or prevent livestock attacks can be more effective. If established wolf packs are eliminated, new wolves will colonize the same habitat and the problems may continue or even increase. By working with livestock owners and wolf experts, we believe non-lethal proactive methods in many circumstances can prove for more effective than lethal control. Under this component of alternative 2, however, the rush to implement lethal control of potential problem wolves may compound the problem. If these circumstances were to be adopted as standard management of wolf conflicts, Defenders would strongly consider withdrawing our financial support and resources for compensating livestock owners. Unfortunately alternative2 (and alternative 3) are also too lenient in allowing the lethal take of wolves simply for threatening to kill livestock or pets. It is an especially troubling provision when applied to wolf management on public lands.

Alternative 3, Additional Wolf

Summary of Comments: This alternative is similar to the Updated Council Alternative (2) except the breeding pair trigger increases to 20, and FWP would not create a compensation program. Some comments support the higher number of breeding pairs while other comments oppose the higher number. Closely related comments support implementation of Alternative 2, but with an increased number of breeding pairs. Some comments suggest modifying it to include a compensation program similar to Alternative 2.

Response: FWP prepared this alternative in response to public comments calling for greater numbers of wolves in Montana and that FWP should not create a compensation program. Even though FWP did not select this alternative as its preferred, FWP is aware of the interest for a larger wolf population in Montana and that management be conservative. FWP also recognizes that it would have even greater management flexibility if the wolf population were larger. But FWP did not select this alternative as it's preferred in part because liberal tools would not be available until the higher number of breeding pairs identified in this alternative (20) were documented. FWP desires to have the greatest degree of management flexibility in selecting tools as soon as possible upon assuming management authority. Even under the preferred alternative, the wolf population will probably still increase despite the lower number of breeding pairs identified as the signal to change from conservative to liberal tools or vice versa. The rate of population growth, however, is projected to be slower given a benchmark of 15 breeding pairs vs. 20. In fact, the number of wolves in Montana in 2015 predicted by the preferred alternative is only slightly lower than predicted under this alternative, if assumptions are valid and the population performs as predicted. The 15 breeding pairs outlined in the preferred alternative is not intended to function as a cap on the Montana wolf population. Rather it serves as a signal to change management strategies in response to the wolf population status. See the Wolf Numbers comment summary and FWP's response below.

One comment states that if distributional criteria are not part of the plan, that the number of breeding pairs should be increased as a surrogate to ensure adequate distribution of wolves across the state. The preferred alternative does not make any a priori assumptions about habitat suitability nor requiring a specific distribution. In part, this is because the gray wolf is a habitat generalist and its ecological requirements can be met across a wide variety of habitats and suites of prey. Human social tolerance varies across space and time at widely varying scales and is also difficult to predict at the scale of a wolf pack territory or even a broader landscape. The management approach would provide for long term population persistence and connectivity by maintaining adequate numbers of wolves and provide legal protections against indiscriminant killing. FWP believes a benchmark of 15 breeding pairs prior to using more liberal management tools will maintain adequate wolf numbers and that wolves will find their place on the landscape by finding suitable habitats. As noted above, the wolf population is still predicted to increase in size under the 15 breeding pair benchmark. If the population is not maintaining itself, FWP can take corrective action.

In addition, FWP is aware of the need to balance social acceptance for wolves with the need to address the economic losses that wolves sometimes cause. One way to address those losses is through reimbursement for confirmed and probable damages caused by wolves as recommended by the Wolf Advisory Council. The council discussed the concept of compensation at great length and concluded that it is an important part of the overall program. FWP agrees. The reader is referred to later sections of this appendix for FWP's responses to comments on specific issues as they relate to this alternative.

FWP is aware that the phrase "threatening to kill" is vague. The Wolf Advisory Council discussed this issue on many occasions and had difficulty defining what constituted "threatening" wolf behavior towards livestock with any degree of consistency from one scenario to another. FWP agrees. In Montana statute, "threatening to kill" is the same standard that applies to black bears and mountain lions in the context of defending livestock or property. Citizens do not appear to have interpreted that standard too liberally for black bears or mountain lions. Black bear populations appear to have at least maintained themselves and mountain lion populations have increased in both number and distribution with suitable prey availability. Whether or not wolf populations would be adversely affected under this standard remains to be seen. However, given the higher reproductive potential and dispersal capability of wolves, FWP is confident that corrective measures taken by FWP and the FWP Commission could mitigate or reverse any adverse effects if too many wolves are killed under the "threatening to kill" clause. FWP always has the ability to make more conservative decisions through the adaptive management framework in other aspects of the program if the wolf population approaches the relisting threshold.

Many comments support the workshop idea incorporated into this alternative. Whereas the original Wolf Management Advisory Council was appointed by a former Montana governor and this group alone made recommendations to FWP, their meetings were open to the public as per Montana's "open meeting" law. Members of the public in attendance were provided an opportunity to speak or submit written comments. While the preferred alternative calls for a standing advisory council, members of the public will still be able to attend and provide input. FWP also expects to have a regular presence at various stakeholder meetings to exchange information and foster working relationships with all interested parties. In addition, FWP will be available to attend meetings and workshops at the local level, whether county commission, local grazing district, rod and gun club, or conservation organization. FWP is certainly not opposed to the annual workshop concept described in the other alternatives, but is not committed to establishing that as the primary means to collaborate with stakeholders at this time. FWP could still hold a workshop even with the establishment of a standing advisory council.

Representative Comments:

W60: Concerned that alternative #3 and #4 don't have a compensation program. Compensation by others can't be predicted, how much effort and cost?

W104: Prefer alternative #3. Setting 20 breeding pairs is going to allow us to keep them off the list (more flexible).

W186: I support alternative #3 because larger number of breeding pairs provides for more flexibility, also protects against stochastic events. Less likely to fall to where more management is needed. Main concern with #3 is no compensation. It seems compensation was left out to sway the public.

W199: Prefer #3. I like the 20 breeding pair requirement. I think compensation for livestock loss should be the same as in alternative #2.

W996: I like #2 – I don't like the 20 pairs. I think 20 is pushing it.

W1193: Prefer Alternative #3, due to its more conservative approach relative to management triggers and it's more wolf friendly.

W1265: Alternative #3 is better option but needs compensation in it or #2 with 20 breeding pairs.

W1354: Alternative #2 is most practical. Alternative #3 iffy because too many more wolves. Public won't tolerate. Like flexibility in #2 and #3. Keep options. Need more fed money to pay. Wolves are a natural resource. Don't want state to start paying what feds have been paying. Hunters and anglers can't afford to pay.

W1432: Prefer #3 if compensation is included also.

W33: Alternative 3 – additional wolves – too costly, too many wolves.

L0125: Our first preference is Alternative 1. If management must be turned over to the state, then Alternative #3 which calls for additional wolves would be our next choice. We believe that the presence of wolves in our state enhances the quality of life here and is a vial part of what makes this a wonderful place to live.

L0229: We support alternative #3 because it sets the number of breeding pairs at 20 before changing management strategies from conservative to liberal, provides full legal protection for wolves and sets clear and specific rules for when citizens can kill wolves that are threatening livestock.

L0239: The state plan relies almost entirely on a population objective based on number of breeding pairs and includes, for example, no specific requirements for geographic distribution of these pairs. We believe that its is important that wolves be allowed to thrive in many areas of Montana and, if specific geographic distribution criteria are not part of the plan, that a larger number of breeding pairs may be an adequate surrogate to assure an adequate distribution of wolves across the state. The plan should not allow private citizens to kill wolf unless it poses an immediate threat to human life, livestock, or other property. Stewardship methods that reduce conflicts should be implemented before lethal control measures. Control measures should be selective against offending wolves only. We agree that an adequate compensation program for livestock losses to wolf predation is a key element in establishing social tolerance for wolves and other predators than can adversely affect livestock producers. The current sidesteps the details of how to accomplish this program and establishes only a process to this end. We believe that ultimately a state-funded compensation program, similar to Wyoming's, will be the most workable solution. We believe this should be funded from the general fund and not from hunter fees.

L0247: I am comfortable with the concept of the state taking over wolf management, AS LONG AS funding issues have been thoroughly addressed. This still needs federal dollars, because it is a federal priority. I like alternative #3 the best.

L0277: Alternative #3. This allows for more breeding pairs yet strong landowner flexibility in dealing with problem wolves. I want the State of Montana to participate to some degree in the compensation program. I am an avid hunter and outdoors person and strongly support the wolves' place in Montana.

L0327: … supports an amended alternative 3. We would like to see some specific language in alternative 3 that commits the state to strong effort to protect key wolf habitat and linkage areas.

L0076: Alternative or 3 because 15 packs is too few for the millions of acres in MT. No scientific justification (population viability analysis or other model) for 15 pack minimum.

E011: I prefer alternative 3 simply because the breeding pair benchmark is higher. I think that a benchmark of 20 as opposed to 15 would put Montana wolves at a safer distance from the prospect being classified as endangered again. I believe that a compensation program is necessary to keep everyone happy. I also think that under all the alternatives that there should be incentives for citizens who are working to reduce or avoid conflicts between their livestock and wolves. Since wolves are here to stay it is important for livestock owners to demonstrate responsible animal husbandry practices such as removing livestock carcasses treating and removing injured or diseased animals and avoiding active wolf den sites. I believe that the State of Montana should continue to have a wolf management advisory committee to continue to identify, discuss, and discern management goals to aid in resolving conflicts and to educate the public.

E039: Alternative #3. I strongly believe that the higher the number of minimal breeding pairs (20 in #3) will make management easier for Montana. Higher numbers will make management easier because removal of problem causing wolves will have a smaller impact on the overall status of the wolf population. This will make control much easier for ranchers and if an entire pack must be removed in order to protect ranchers and livestock there will be more breeding pairs to replace the individuals that must be removed. Over long periods of time, this will lead to healthier populations and ensure wolves keep a place.

L0331: Unfortunately Alternatives 2 and 3 are also too lenient in allowing the lethal take of wolves simply for threatening to kill livestock or pets. It is an especially troubling provision when applied to wolf management on public lands. This standard is far too vague and would allow for varying and liberal interpretation essentially permitting any livestock or pet owner to kill wolves simply for being present but without requiring evidence of depredation intent. The final plan should allow for the use of only nonlethal deterrents in the case of wolves threatening livestock and pets. It should not permit lethal control based on individual interpretation of what constitutes threatening conduct by wolves.

Defenders supports a modified Alternative 3 with the addition of a livestock and livestock guarding dog compensation program and a proactive nonlethal depredation management program to assist livestock owners in co-existing with wolves and other native carnivores. Though we understand the concerns stated regarding challenges and limitations of compensation programs, many of those identified can be adequately addressed and the social benefit of such a program outweighs the limitations. We would work with the state of Montana and entities to share funding, new ideas, and management sources for these programs. Defenders believes it would be inappropriate to create a sport-hunting season on a newly delisted species. This component should be eliminated from Alternative 3 and replaced with provisions for nonlethal harassment. Citizens should not be allowed to kill wolves except in situations of protecting human safety which are extremely rare. We favor creation of the proposed annual workshop and interagency coordination meeting.

Both alternatives 2 and 3 offer fundamental strengths that we support and appreciate. These include: No artificial cap or limits on maximum wolf numbers in Montana. No artificial boundaries that exclude wolves from suitable habitat in Montana. No immediate hunting of wolves following delisting.

Alternative 4, Minimum Wolf

Summary of Comments: Through aggressive management, this alternative "caps" wolf numbers and "zones" wolf distribution to prevent wolf colonization east of the Rocky Mountain Front. Some comments support this approach. Most input supporting a zone originated in eastern Montana and is discussed under Alternative #2 above and under Wolf Distribution below. Other comments oppose the low numbers, restricted distribution and aggressive philosophy. Other comments opposing the zone concept state that wolves should not be confined just to western Montana -- all of Montana should share the responsibility so as not to concentrate all the impacts in the western part. Many comment supporting the 100% federal funding component also note concerns about "strings" that come with funding from outside sources. Some

comments suggest modifying this alternative to increase the number of breeding pairs to 15, yet keep the zone. Other comments want FWP to add a compensation program.

Response: FWP did not select this alternative because it would not allow FWP to manage wolves within an adaptive framework. FWP would not be able to meet the differing conservation and management expectations and interests that occur across the spectrum of social tolerance for wolf restoration. FWP management flexibility could be constrained by the low wolf numbers in that each wolf becomes important to the overall population when total numbers are low. Some management decisions to resolve conflicts may not be satisfactory or accepted in light of the need to maintain enough breeding pairs to prevent relisting. FWP also points out that the philosophy of this alternative would be inconsistent with how FWP approaches wildlife conservation and management for other species. FWP does not administratively declare an upper limit or maximum number of individuals of any wildlife species in the state in the sense of a "cap." Instead, FWP identifies population objectives and management frameworks that are based on landowner tolerance, habitat conditions, social factors, and biological considerations. Wildlife populations are then managed according to the objectives and current population status, using an array of management tools. This alternative is also inconsistent with the overall recommendations of the Wolf Advisory Council. The reader is referred to later sections of this appendix for FWP's responses to comments on specific issues as they relate to this alternative.

Some comments recommend changes to Alternative 4 that would incorporate the controlling acts of the Montana Legislature and make FWP's management plan comply with state laws. FWP does not believe that the preferred alternative conflicts with these new actions by the 2003 Montana Legislature or any other state laws or administrative rules. On the contrary, the direction established by the preferred alternative is the most consistent of all the alternatives. In it, FWP will meet its legal requirements to maintain a secure, recovered population, comply with state laws and Commission policy, integrate the wolf within Montana's wildlife heritage, while at the same time lessening potential negative impacts to those most directly affected by wolf presence.

Some comments suggest that FWP adopt a more stringent management protocol for breeding pairs that migrate. Additionally, some comments support FWP enforcing an administrative "zone" and translocating any wolves in eastern Montana back to western Montana. FWP clarifies that the state's wolf conservation and management plan will apply to wolves wherever they are found in Montana, regardless of breeding status or location. While the preferred alternative does include translocation as a management tool for application in some circumstances, FWP does not plan to translocate wolves from eastern Montana to western Montana to enforce an administrative "zone." See the Wolf Conservation and Management section below. FWP anticipates that the circumstances in which it would select translocation would be rare.

Representative Comments:

W88: 10 bare minimum is my favorite. It's a problem getting accurate count. Don't want any more wolves than we have to; may need more than 10

W119: Like alternative #4, but because of worries that the wolves may be relisted if below 10 pairs, would have to support alternative #2. Federally funding compensation program; regulated wolf harvest

W216: alternative 4 preferred, but zero tolerance

W287: Alternative 4, move from 10 pairs to 13 or 14.

W348: I like #4, too. Would be distributed in western Montana, not eastern.

W462: lean towards #4, but with compensation

W464: lean towards #4 because it is fully implemented with federal dollars. Why should we be paying for them?

W542: I support Alternative 2. Draft is excellent. Allows the use of management tools in the most advantageous way. Alternative 4 is most expensive so not good. Would compromise in the direction of Alternative 3, not #4.

W655: I'm not for any alternatives 100%; #4 is best choice if any.

W778: Alternative 4 – all I want is the fewest wolves possible without it being on the federal endangered list.

W1328: Must have alternative for everyone. Agriculture community could live with alternative 2. But add in zones as in alternative #4. Manage migrating wolves more aggressively. Must delist first.

W1428: Prefer #4; like the idea of protecting private property. Concerned that wolf could be relisted under this option. Therefore, would prefer #2.

W112: Alternative #4 – less numbers, less problems, no state funds

W99: Alternative #4: Ten breeding pairs is an adequate number of wolves to assure future of wolf survival in Montana without severely damaging big game populations and decreasing hunting opportunities in the state. Guarantee wolf harvest with hunting and trapping

W122: Number 4 – the less wolves the better. Federal funding. Wolves should be distributed east and west and not just in western Montana

L0023: I am adamantly opposed to both options #1 and #4.

L0047: When crafting a wolf management plan for Montana, FWP must recognize that it is required to honor the political will of the people of Montana. MSSA wishes to remind FWP that it is hunters who pay the bills for wildlife management in Montana, and therefore, the collective voice of hunters must be give a commanding role in FWP management decisions that may have a profound effect on our traditions, culture and opportunities. MSSA rejects all proposed alternatives for wolf management contained in the draft EIS and recommends adoption of a new alternative that would most closely resemble alternative 4. In addition to the management directives contained in alternative 4, the new alternative is required by controlling acts of the legislature as flows: HB262, HJ32, HB306, SB209. The new alternative eventually adopted by FWP must be consistent with these acts of the Legislature. The new alternative prepared by FWP will necessarily be circumscribed by these acts, and not driven by public opinion polls, and not even by any perceived consensus of public comment concerning the draft EIS.

L0094: We realize that it is critical that we get the wolf delisted and feel you can do this under alternative #2 with this exception: you establish a zone for the wolf population. Give landowners more flexibility in central and eastern zones. We have enclosed a map with our zone on it. We feel that you can obtain your goal of actively managing wolves west of the line we have drawn on the map. Wolves should not be allowed to establish themselves east of this line. A much more stringent management plan should be in place for breeding pairs that migrate. We would like to see the wording in Alternative 4, page 91, added to Alternative 2 – "wolf distribution would be artificially zoned so that wolves would be trapped and relocated to western Montana or removed from the population if suitable release sites could not be found…"

L0166: I would favor alternative #4 simply because I see no cap on the number of breeding pairs in Alternative 2. Should be entirely funded by the federal government. The state should not implement a plan which relies on revenue from the harvesting of wolves. In my mind this is a direct conflict with the management of deer and elk.

L191: I remain concerned that alternative 2 is unnecessarily liberal and encourage reconsideration of alternative 4. With a three state recovery area, Montana's contribution to the recovery effort need not exceed 10 breeding pairs or w/3 of the area goal.

L0248: Alternative 4, on its face seems the best solution for wolf management from the livestock producer aspect. Our apprehension is that the cost of this management plan could far exceed the cost of Alternative #2. This alternative proposes that management be turned over to the state and yet the federal government would be expected to entirely fund the program. In addition, wolf numbers would be managed at the knife edge of the requirements of delisting so unanticipated occurrences such as disease, drought, or hard winters could tip them back into the endangered listing. If the USFWS does accept such a plan, we are stuck with management continuing under ESA and/or substantial additional cost to the state.

L0253: In accordance with our belief that uncontrolled wolf populations will reduce big game hunting opportunities and our support for hunting as a multiple use on public lands, we vigorously oppose all the alternatives, except alternative 4.

L0284: Alternative four looks good on the surface, but with the state having to pick up the funding for control and for payment of damages, that is not an alternative.

L0285: It is tempting to say that MOGA's first choice is alternative 4, however there are significant concerns associated with alternative 4. It appears to be driven by private landowner's low tolerance for wolves, tolerance that is certainly understandable. The problem arises when one considers the results of zoning and forcing wolves into public land, mostly in western Montana, rather than a more equitable, wider pattern of distribution. Alternative 4 may provide for trapping and hunting, but probably only in the beginning when the wolf populations need to be downsized quickly. Once the populations reach objective, trapping and hunting might become an occasional management tool, with strict quotas, rather than an ongoing one. Managing for a minimum of ten breeding pairs would be extremely expensive, as FWP would be forced to monitor wolves much more closely than with alternative 2. While wolf predation on big game populations would be minimized under alternative 4, the risk that Montana could fall below the population objective and return to a listed status is too important to ignore. After careful consideration, MOGA wishes to go on record as supporting with some modifications. We believe 15 pairs is sufficient and practical.

L0286: In alternative 4, artificial zones are established to prevent colonization of eastern Montana (because of possible increased livestock conflicts?). Without a map of the regions to know where the boundaries are, does this still maintain an adequate corridor between Montana, Canada and Wyoming populations?

L0287: Distribution of wolves needs to take on more of the properties of alternative 4. Wolves should be encouraged to stay in the western portion of the Montana and the population that expands into eastern Montana be more aggressively managed. Alternative 4 also states that more management and control will be carried out by landowners – this language should be included into #2, but in conjunction with FWP. Compensation needs to be included in the adopted wolf management plan. FWP is best positioned to act as the coordinator for the development of a compensation plan. It is stated in #2 that no FWP or Montana general fund money will be used to fund a compensation program, but it is essential that your agency take the lead in setting up the program and secure an adequate source of funding to cover the anticipated losses that will occur. FWP must be prepared to accept the liability if these loses are too great and force an operation out of business. The Info Ed / Public Outreach segment of #2 would be much more beneficial if the language "increased interaction with landowners to notify when wolves are in the area" was included as stated in alternative 4. MSGA still feels that the additional 4.3 FTE and 2.5 FTE enforcement staff are not warranted. MSGA feels it is important to redistribute additional funds toward preventative efforts and depredation. By reducing the hiring for suggested positions, more funding can be allocated to reducing wolf/livestock conflicts.

L0030: Support alternative 4. The estimates in other plans on livestock losses and wildlife reductions are too low. Funding from Montana should be less than 10% or the same % as the population of Montana is of the US. I would increase the breeding pairs to someplace between 15 and 20. Confine the wolves to National parks and wilderness areas as much as possible.

L0096: Alternative 4 – lowest number of wolves. … Put wolves evenly throughout the state as there is as many deer in eastern Montana as western …

E6: the minimum wolf alternative is the best of the choices next to eliminating them entirely

Alternative 5, Contingency

Summary of Comments: In this alternative, FWP would begin managing wolves through an agreement with USFWS prior to USFWS completing the delisting process and/or resolving litigation. FWP developed and analyzed the impacts of this alternative because it received many comments expressing concerns about delays. Many comments on this alternative support some level of FWP involvement prior to complete delisting, although they were relatively few in number compared to the other alternatives. Many also note a concern that the scenario described by this alternative could become the *defacto*, long-term outcome and that wolves may never get delisted. Many of the comments mentioning Alternative 2 also mention Alternative 5. The funding split is favored, but some comments express concern that federal funding may not be reliable over the long term.

A few comments specifically oppose FWP involvement under this alternative because of a lack of trust in state elected, appointed, or agency officials. These comments overlap with comments mentioning Alternative 1 (No Action). Still other comments oppose this alternative because of concerns that it would decrease the incentive for USFWS to achieve full delisting and transfer authority to Montana or that FWP would still be constrained by federal rules.

Some comments suggest modifying this alternative similar to Alternative 2 (Updated Council).

Response: FWP did not select this alternative as its preferred because FWP would like to assume management authority for a completely delisted wolf population and proceed with a program guided entirely by state laws, administrative rules, and policies. The potential for confusion or uncertainty about jurisdiction and authority could, in the long run, be a disservice to the wildlife resources of Montana (including wolves) as well as the public. However, FWP is aware and sensitive to the concerns over the potential for delays to adversely affect Montana's interests. It does represent an interim step in which FWP could carry out day to day wolf management duties, gaining more experience and addressing a desire for increased agency responsiveness beyond current satisfaction with federal authorities. At this time, FWP will still identify the Updated Council Alternative as its preferred option, but may revisit this alternative at some point in the future if delisting is not initiated and completed in a timely fashion.

Representative Comments:

W84: Implement alternative 5 in the interim, then go to alternative #2 after delisting

W107: support alternative 3, second choice alternative is 5

W191: If we go with contingency plan, would like to see 20 pairs instead of 15.

W540: I like alternatives 2 and 5. What I like about 5 is FWP would take some control if delisting takes time. I almost completely agree with #2.

W587: If approval is needed, I support alternative 5 because it gives some control and only costs the state 10%.

W990: Go for #2 – why mess around with #5

W992: if there is an interim period, alternative 5 would be good – it gives you some time to learn until delisting

W993: I don't want #5 to be our long term objective, but we would like to see it until we can get #2 in action

W1235: Don't want federal government involved. No trust. I don't like alternatives that have federal involvement.

W1151: the problem with the contingency plan is that it is under federal management

W1310: populations will grow rapidly – alternative 5

W37: alternative is a good mix of options and still keep wolves from being relisted. Need to have an easy method for compensation. I am afraid that we will be at Contingency Alternative – set limit at 10 if this happens.

W61: Contingency or updated council. Contingency really hits the one concern I have.

L203: I would advise caution in depending on long-term availability of federal financing support. Some mechanism be set up to assure continuous funding from FWS with protection against the effects of inflation. If federal funding does disappear, it behooves FWP to have the prerogative to shift the management back to FWS – somewhat like the situation provided for under alternative 5; too often the fact that federal funds are also derived from taxes tends to be overlooked.

L0248: MFBF and other livestock organizations worked very hard and in good faith to develop a plan that they feel addresses their concerns and yet gives pro-wolf advocates the comfort that the species will continue to exist on the landscape. All of this work could be negated and the entire process placed in jeopardy if lawsuits are allowed to derail or significantly slow the implementation of wolf management. It is vial that Alternative #5 be in place as a fall back plan in the event the above mentioned lawsuits occur and delisting is help up for an indefinite period of time in the courts.

L0284: Alternative #5 must also be considered, seeing that there already are threats by environmental non-hunting groups to stop any delisting of the wolf (MWGA).

L0285: Alternative 5 should be considered a "default position" and not a first choice. Alternative 5 appears to mandate management by federal rules rather than Montana law – and provides no federal funding (MOGA).

L0287: All of the time and effort put forth to develop a management plan by the State of Montana may be put on hold while the court system sorts through the lawsuits and appeals and for this reason, it is important to include #5. MSGA feels it is reasonable to have a "fall back" plan to allow for the transition to a full delisting of wolves. MSGA is concerned that if FWP is required to adopt this alternative, your department and the FWS joint management will remain will into the future. It would be detrimental to our state if your department got caught into a management effort similar to grizzly bears. MSGA has contended all along that FWP should have sole responsibility for management of wolves.

L0330: We expect to see litigation used a means to prolong the delisting process. It's vitally important that the department request some management responsibilities for the interim period that will allow them some control over expanding wolf populations.

L0343: Contingency is best option for me as a permanent approach – wolves remain on the federal list until more stable and larger population; like shared management under a cooperative agreement; federal livestock rules until FWP has a stable proven management program.

L0012: I believe the contingency plan should be the adopted plan. Why the big hurry to delist? I am afraid we will undo decades of work to reintroduce them in a few years and we'll be back where we started. Why the hurry? So we can have open season on wolves? Also this way, the federal government pays the majority of the costs. Just make sure the state has major input and that ranchers do have flexibility to protect their herds

L0315: I strongly support alternative #1 and strongly oppose #4 and 5 …. Having noted my opposition to any state takeover of wolf management, I would also be opposed to any partial management under alternative 5 while the feds are in the litigation which is bound to occur

None of the Alternatives

Summary of Comments: Some comments do not support any of the alternatives. This is generally accompanied by a preference for a management approach outside the sideboards of the federal recovery criteria (e.g. classifying the gray wolf as predator, starting a bounty system, or "no wolf"). Some comments support the "Wyoming" approach of dual classification – big game in national parks/wilderness and predator outside. Other comments prefer that USFWS takes a more conservative approach to the existing federal program. A few comments offer a customized collection of management tools or approaches that recombine elements of the alternatives already included and analyzed.

Response: FWP could craft an entirely new alternative for inclusion in the Final EIS that would reflect these comments. However, FWP cannot consider any alternative that is outside the sideboards of the federal recovery program requirements to maintain a recovered population or one that is beyond the jurisdiction or ability of FWP to implement. The reader is referred to pages 8-11 of the Draft EIS for a discussion of issues identified but not addressed in the Draft EIS and why. Page 65 of the Draft EIS described three alternatives that FWP identified through issue scoping but did not consider further. Lastly, the reader is referred to later sections of this appendix for FWP's responses to comments on specific issues.

Representative Comments:

W247: Should be 6 alternatives – 6 is no wolves at all.

W300: Wyoming proposal – extend hunting to all public ground. Let landowners on private property manage as he/she sees fit.

W738: There needs to be another alternative. There are a lot of variables. Maybe we should wait 5 years or so before creating a management plan when we have a better idea of what wolves need.

W953: alternative 6 – eradication

W835: Can't support any of these until funding sources are cleared up. Funding has to be clarified.

W48: Alternative #4. Please remove the BS from your draft. Many statements are not true. No wolves should be an option.

W55: None of the alternatives. The local people do not want wolves here. The federal government spent millions to get rid of them. If people want wolves, put them back in the city, not here. Eliminate them now!

W116: As a landowner, taxpayer, and one who raises cattle, I believe that if the people want o see wolves in the national parks, fine. I believe if they leave the parks and the wilderness areas, they should be considered a predator and have the same status as a coyote.

W0026: They are an important part of the ecosystem, and have a right to their place on the planet, as do all living things. Certainly farmers and ranchers have a right to protect their cows, sheep and other livestock. So my proposal is that wolves can only be killed when a farmer or ranger sees them attacking his livestock, or an attack is imminent. The farmer or rancher must then report the killing and sighting of the wolf in the vicinity of his livestock to the appropriate FWP agent. Only with these strict rules can we hope to save the wolf from those who wish to exterminate this beautiful animal.

L0027: None of Montana's FWP alternatives give the landowner the right to kill wolves on their property. This must be an option! It is unconscionable to expect the livestock owner to tolerate financial losses form a source over which they have no control. Compensation for losses after a long drawn out verification period, while losses are still occurring, further stresses an already depressed industry. Let those who desire wolves finance the protection of the other's property. When then is FWP accepting the danger wolves pose to the economic well being of the citizens and not protecting us from harm? The wolf is not a native species. Rather wolves are an invader species. Our existing species are those endangered by this new predator.

W0047: MSSA rejects all proposed alternatives for wolf management contained in the draft EIS and recommends adoption of a new alternative that would closely resemble #4 (see above under #4).

W0091: I am in favor of NONE of the alternatives offered in the draft EIS, as each of them is unsatisfactory in one way or another. We have here a proposed wolf program which we are being asked to agree to with just too many open-ended totally unmeasurable variables.

W0137: The only sound plan is to remove wolves from farm and range areas – they came first and wolves should be gone, gone, gone!!

W0140: The five alternative wolf plans proposed by FWS and FWP are all unacceptable. The wolf reintroduction program will go down in history as an abominable disgrace perpetuated upon the taxpayers of Montana, Wyoming, and Idaho by the USFWS. To go along with any of the 5 proposals would be going against all of the people who pay taxes, buy sporting equipment, and purchase hunting and fishing licenses.

W0160. Would like to see the state install the same type of regulations that would follow the great insight of the state of Wyoming so that landowners and concerned citizens could shoot at will all wolves that are seen on public or private land other than certain national parks and state wildernesses that are designated as safe havens. We really don't want to break any laws, so think about passing laws we can all accept, not just the environmentalists.

L0173: Wolves are an important part of a healthy ecosystem. Wolves are important to the economies of the Montana area. Wolves have received a "bum rap". They are not the huge predation problem they have been made out to be. Adopt a no wolf-killing plan.

L0174: Put a bounty on wolves like we used to have. If we aren't smart enough to control them, then they will become a threat to our lives as well as our livelihoods. Dinosaurs became extinct and I haven't missed them.

W0234: It was unanimously decided by the club to reject all 5 alternatives. We want the wolf to be declared an unmanaged predator with the same rules and regulations as those of other unmanaged predators such as coyotes.

L0313: Every wolf pack that has come in contact with domestic livestock has eventually had conflicts resulting in direct or indirect losses to those livestock. Since the perpetuation of Montana's wildlife depends on the habitats of Montanans private lands we feel the following criteria must be incorporated into the wolf management plan for Montana. Wolf numbers must be the absolute minimum to satisfy relisting the wolf. Recognize the wolf is a predator and livestock producers must have the right to protect their livestock on private and public ranges, using preventive and reactive methods. Damage caused by wolves must cover confirmed ad probable kills and also all indirect losses form wolf conflicts. Compensation is not acceptable and should not release those responsible for the accountability of reintroducing the wolf and the damages caused by their actions. Management of the wolves should be directed to maintaining the minimum number of packs to prevent re-listing and also establish a maximum number of packs Montana has to tolerate and provide wildlife and livestock as its prey base.

Summary of Pubic Comments on the Issues and FWP's Response

FWP received many comments that were similar or repetitive in that they raise the same issues. Because of the significant degree of overlap between comments on the alternatives and comments on the general issues, most of FWP's responses are presented under the issues section below instead of the alternatives section above. However, if FWP didn't

respond to a comment under the respective issue, the reader should look under the alternatives for additional information about FWP's response. FWP received a significant number of comments on the Draft EIS. Therefore, only a representative sample is included in this appendix. The project file contains a complete record of all comments received by FWP.

Wolf Conservation and Management Strategies, Wolf Numbers and Wolf Distribution

This group of public comments reveals many different philosophies, tools, and strategies for how wolves could be managed; comments also address how many wolves would be in the Montana population and where they would be distributed. FWP received comments that were diametrically opposed – both in philosophy and specific strategies. Each subgroup is addressed separately below.

Conservation and Management Strategies

Summary of Comments: Some comments address the wolf management philosophies and strategies of the specific alternatives, as discussed above. One comment suggests that the Draft EIS failed to identify what would be gained or lost by choosing one alternative over another. Some comments support the adaptive management framework in that it allows FWP to address local concerns and adjust management based on local conditions. These comments frequently say that managing wolves similar to mountain lions and black bears and other wildlife makes sense. Another group of comments say that it is not appropriate to manage wolves similar to mountain lions and black bears because wolf biology is very different from other large carnivores. Other comments oppose an adaptive management framework by stating that it is too complicated and cumbersome.

Some comments say that the breeding pair benchmark is too high of a standard, whereas others say that the "social group" definition is not stringent enough because reproduction would not be confirmed. Some comments supporting the proposed "social group" definition want FWP to use the more general definition from the outset. Still other comments applaud the change from "packs" in the original planning document to breeding pairs in the preferred alternative because it is more specific and required successful reproduction to count toward the benchmark. A few comments question whether FWP should count pairs located on Indian reservations towards the breeding pair benchmark even though FWP doesn't have authority to manage wildlife within reservation boundaries.

Some comments say that the liberal management tools are too liberal and heavy-handed, serving to keep the wolf population right around the adaptive trigger of 15 breeding pairs without allowing the population to expand because of continued selection of ever increasingly liberal tools. These comments also suggest that the benchmark would function as a *defacto* "cap" on the population. Some comments suggest that FWP not allow citizens to shoot or poison wolves and that FWP provide strict guidelines to citizens. Some comments go on to say that lethal control actions within the adaptive management framework should only target offending wolves. Some comments show concern about the proactive removal of "potential problem animals" and that accurate identification is difficult or that this management strategy could place the population in jeopardy. Some comments also suggest that proactive methods, harassment and scaring tactics will suffice to avoid conflicts and prevent escalation of conflicts.

Some say that the preferred alternative goes too far in accommodating humans over wolves and suggest that the program be grounded on wolf ecology and not human preferences. Related comments express concerns about excessive illegal mortality without stiff penalties. Additionally, comments say that the preferred alternative did not specifically identify penalties for illegal killings. One comment suggests that the draft EIS is deficient in that FWP did not analyze the implications of changes in human behavior that people will become increasingly intolerant of wolves once ESA protections are removed.

Some comments support the "species in need of management" designation while others want the gray wolf to be classified as a big game animal or furbearer immediately. Other comments suggest that wolves be legally classified as predators. A related set of comments either support or oppose regulated harvest of wolves through hunting and trapping activities by licensed individuals.

Response: The spectrum of alternatives presented in the Draft EIS was based on public comments obtained during the scoping phase. The Draft EIS discloses and displays the relative impacts of each of the alternatives in a summary table starting on page 148. The reader is referred to that table to consider the relative impacts of one alternative compared to another. The relative gains or losses or costs or benefits of one alternative over another is often in the eye of the beholder and determined by one's perceptions of whether they will benefit or be harmed by the outcomes. FWP is required by law to consider the impacts objectively. In selecting the alternative based on the work of the Montana Wolf Advisory Council, FWP is attempting to balance a diversity of public interests and desires about wolf conservation and management. The balance point is based on a delicate set of tradeoffs, the consensus of the advisory council, and public comments gathered through this EIS process. FWP envisions continuing the dialogue about wolf management at the local level through implementation at the regional office level and personnel stationed throughout Montana. FWP welcomes the public to continue to be involved and help FWP make decisions.

FWP believes that it is appropriate to manage gray wolves in Montana through an adaptive management framework because it allows FWP flexibility to implement a balanced program within a complex management environment that includes people, a diverse physical and ecological landscape, and wolves. FWP's experience with managing mountain lions and black bears has demonstrated that people are an important part of the management environment and that having the flexibility to respond differently in different circumstances has contributed to increasing human tolerance for the presence of large carnivores. While the preferred alternative seeks to integrate the gray wolf into all other FWP wildlife management programs and seeks to manage wolves consistent with how mountain lions and black bears are managed, FWP does acknowledge that there are important ecological differences between the three species. Reproductive rates, pack existence, and wolf behavior require that FWP take those differences into account when making management decisions. However, FWP seeks to manage large carnivores in similar philosophical ways and to implement the programs with as much consistency as possible while taking each species' unique ecology into account.

An adaptive management framework that establishes a benchmark provides a more objective framework within which to make decisions. The benchmark, when used in conjunction with population monitoring data that provide an insight into population status and trend, helps determine appropriate management tools. The adaptive management framework described under this alternative will guide management for all wolves in Montana, regardless of breeding status or whether or not a particular wolf is affiliated with a pack. Breeders, non-breeding, lone dispersing wolves and pack affiliated wolves will all be conserved and managed as a single Montana population within the larger northern Rockies population using the same conservation and management tools. Additionally, FWP seeks to manage wolves using a consistent set of management tools and principles, while at the same time allowing the flexibility to be responsive at the local level. FWP owns a small fraction of the potential habitat used by wolves in Montana. FWP will work with the respective landowners towards implementing the program with that balance of consistency and flexibility, whether the landowner is a private citizen, a state or federal agency, or a private company. FWP and the public must also be aware that landowners have discretion over their respective properties. See Table 22 in the Final EIS for additional detail on the spectrum of wolf conservation and management activities through the adaptive framework of the preferred alternative.

FWP is sensitive to the concerns that management decisions would be too heavy-handed and could potentially jeopardize the long-term viability of a recovered wolf population. FWP is also aware of the concern that the adaptive management benchmark could inadvertently become a "cap" on the wolf population. FWP reiterates that it has been very explicit in stating its commitment to integrating wolves into Montana's wildlife heritage and that wolf management will follow a similar path as the management of other species. FWP doesn't "cap" other wildlife populations. Wolf population size and distribution in Montana will ultimately be determined by the interplay between social tolerance and ecological needs, as it is for other wildlife. Finding that balance point in the case of the gray wolf will take some time. FWP will not intervene based on an arbitrary cap or zone, but will help fine tune numbers and distribution based on social tolerance and the ecological requirements of wolves and other wildlife. Implementation at the local level through Regional FWP personnel will help achieve this. The preferred alternative also calls for the creation of a standing wolf advisory council. FWP's response to public comments supporting the workshop concept is included under Administration/Delisting below.

Upon delisting, the gray wolf will be reclassified under state law from "endangered" to a species "in need of management" which maintains the legal mechanism to prevent intentional human-caused mortality outside the immediate defense of life/property. The preferred alternative states that the FWP Commission may reclassify the species as a big game animal or furbearer. FWP believes that the initial conservative designation is important during the earliest stages of implementation of a state program due to uncertain outcomes of the various management provisions. While FWP has

every confidence that the preferred alternative will maintain a secure population, conservatism is warranted at the outset. When it becomes clear that the management program is maintaining a secure, viable population, reclassification may follow. USFWS and FWP agree that regulated harvest through hunting and trapping are reasonable management tools to consider and implement, so long as the overall total mortality rates from both human and natural causes do not impair the biological sustainability of the population. The Montana Wolf Management Advisory Council and FWP recognize that licensed hunters and trappers are additional management tools which, when implemented with proper consideration and structure, can help fine tune wolf numbers and distribution. FWP would like to have as many management tools available as possible. The preferred alternative specifies that at least 15 breeding pairs are required to use liberal management tools, such as regulated harvest. FWP is aware that aware that there are differing public opinions about the appropriateness of hunting and trapping in general or for specific problem animals and reiterates its assurance that all regulated harvest opportunities will be carefully managed and will not jeopardize the recovered population. FWP will bring the same degree of consideration for population security while implementing kill permit provisions for private landowners. FWP will use the monitoring program to assess wolf population status and population response to the implementation of the adaptive management tools, whether liberal or conservative. In that way, FWP will be able to make the necessary adjustments if numbers decrease. While telemetry is expensive, it will be an important monitoring tool. See Monitoring section below.

FWP also points out that the classification of the gray wolf, as a "predator" under Montana statute would not establish an acceptable regulatory mechanism on human-caused mortality. In addition, creating a dual legal status for wolves in Montana where they would be classified as a "predator" on private land and a "species in need of management" or "big game animal" on public land would also not be acceptable to USFWS for the Montana portion of the northern Rockies population. Nearly all wolf packs in Montana include some proportion of private land within pack territories. In addition, none of Montana's wolf packs resides strictly in wilderness or national parks. FWP would not be able to maintain enough packs to satisfy its minimum legal requirements under a dual-classification scheme.

The preferred alternative confirms that FWP would seek state legislation to make the unlawful taking of a gray wolf a misdemeanor under MCA 87-1-102. FWP would also see legislation to include the gray wolf under the restitution sections of MCA 87-1-111. FWP confirms that the adoption of penalties and fines under Montana law, in addition to FWP Commission rules is consistent with the Council's recommendation that law enforcement be a high priority, that illegal activity be discouraged, and that penalties be similar to unlawful activities for black bears and mountain lions. The FWP Commission will address penalties during a future rule-making effort for the "species in need of management" regulations and the Montana Legislature will address these in a future session.

Yes, FWP would count breeding pairs occurring on reservations if reliable information from tribal wildlife authorities were available. While FWP would not be monitoring those wolf packs within reservation boundaries, tribal wildlife authorities could. Tribal authorities will determine wolf management on reservations. If wolf packs persist on reservations, they will make a contribution to the tri-state population and provide dispersers to enhance connectivity. If packs do not persist, FWP will still ensure that an adequate number of packs do persist off reservations. The reader is referred to the preferred alternative in the Final EIS for additional discussion of how packs would be counted and the discussion about the definition of social groups vs. breeding pairs.

FWP is aware of the concerns about how human attitudes may influence behavior and the potential for political pressure to affect FWP decision-making. FWP and the Wolf Advisory Council recognize that human attitudes and willingness to tolerate the presence of wolves is an important foundation to maintaining a recovered population. FWP is also aware that attitudes towards wolves may change very slowly. FWP's public outreach efforts and responsive implementation should help alleviate the fear and uncertainty in the public's mind about coexisting with a restored wolf population – as both they and FWP gain more experience. Residents of northwest Montana appear to have adjusted to wolf presence slowly over the last 20 years as wolves have increased in number and distribution through recolonization and natural increases. Wolf presence in southwest Montana is a sudden phenomenon by comparison because the reintroduction effort led to a relatively rapid increase in wolf numbers and distribution.

Once the gray wolf is delisted, FWP does not know whether people's behavior will become more or less tolerant of wolves. At the present time, no data support or refute the speculation that tolerance will diminish if the state were to assume management authority. Some public comments say that tolerance would actually increase once wolves were managed by Montana instead of federal officials. Other comments demonstrate low tolerance regardless of what agency is responsible and whether wolves fall under state or federal law. Many Montanans conclude that it would be in their own

best interest to maintain a viable, recovered wolf population in lieu of an emergency relisting. They are aware that excessive human-caused mortality would trigger relisting.

FWP considered the possibility that changes in human attitudes, behaviors, or actions could occur at any time and be precipitated, in part, by a variety of events or circumstances. FWP has also considered that malicious wolf killings could increase in the absence of federal ESA protection and stiff federal penalties. Through the adaptive management framework, FWP will be able to make adjustments. The wolf monitoring program will help FWP keep track of the wolf population and size/status of individual packs in much the same way as the federal monitoring program. In addition, through the FWP Commission, FWP can respond by decreasing regulated forms of human-caused mortality including agency control actions, increasing public outreach, and increasing presence in the field by biologists and law enforcement officers.

Several comments express concern about human safety. FWP believes that public safety is an important consideration because species such as the gray wolf, mountain lion, black or grizzly bear are capable of injuring or potentially killing a person. It is also possible for a rabies-infected wolf to transmit the disease to humans. Though wolves generally fear humans, there are cases where individual wolves lost their fear of people and caused injuries, but no human fatalities have been reported in North America. Under the preferred alternative, FWP intends to reduce the potential for wolf-human conflicts and minimize the risks of human injury due to any large-sized canid. While the risk of an aggressive encounter with a wild wolf is low, FWP believes that the risk goes up in the absence of proper management. FWP will use extensive outreach to inform the public, aggressively discourage habituation of wild wolves, and respond to conflicts where and when they occur. FWP added additional information in the Human Safety section of Chapter 2 specific to rabies. FWP also added additional information about wolf health and disease surveillance in the Wolf Management section of the preferred alternative. See the Hybrids section below.

FWP and WS will make concerted attempts to identify specific problem animals during any lethal control effort while resolving wolf-livestock conflicts. FWP will also bring the same approach to implementation of the special kill permit provisions for private landowners. FWP acknowledges the difficulty experienced by USFWS and USDA Wildlife Services in successfully identifying individual problem wolves involved in livestock depredations. Wolves are highly mobile and may be miles away by the time a depredation event becomes known. Wolves may or may not return to a carcass. FWP also acknowledges that certain lethal control methods may not successfully target individual problem wolves. Resolution of wolf-livestock conflicts is a complex challenge due to the wide variety of husbandry methods and circumstances in which livestock are raised (e.g. large public land grazing allotments in mountainous terrain, small private pasture near human dwellings, large private ranches with remote pastures away from human activity etc.). It is further complicated by the behavior patterns and high mobility of wolves. Each situation will need to be evaluated for its unique characteristics prior to selecting a course of action.

Many comments want FWP to secure adequate funding prior to finalizing a management plan. In the preferred alternative, FWP clearly states that supplemental funding is required to prior to assuming management responsibility so that all aspects of the program can be implemented. FWP is presently working with the Governor's Office, the states of Idaho and Wyoming, and the respective Congressional Delegations to secure adequate funding. The states are seeking funding to become more involved with the federal program leading up to delisting as well as to implement their respective programs after delisting. FWP can still finalize and adopt a conservation and management plan without having the funding, but choose not implement it until the funding is secured.

Representative Comments:

W2: Hunting is not realistic because they are difficult to hunt in the sense elk and deer are hunted.

W5: I am concerned about regulated wolves like other predators (bears, lions) due to reproductive differences.

W6: Managing them like bears and lions is going to be difficult also due to their behavior characteristics (hunting in packs/more offspring etc.)

W23: I like the idea of the state controlling problem wolves.

W26: What definition of "threatening" will there be?

W27: If the population is out of control, would the state look at or implement a sterilization program instead of a hunting program.

W46: Regulated wolf harvest as part of management. Alternative is shoot, shovel and shut-up.

W49: Higher penalties for violations.

W50: How do you keep 15 breeding pairs and still allow hunting by the public?

W55: It's important to recognize that a wolf is a more aggressive predator than bears or lions.

W66: The longer you do nothing, the more difficult it will be to balance the approach.

W94: Adaptive, local management is important.

W95: Go middle of the road to help manage problem areas.

W102: Make the plan more of an ecological solution (elk, deer, wolves, managed together) than an economical solution. Needs to be more of an ecological concern than a human concern.

W109: Don't support public wolf harvest.

W120: Grazing on federal land, federal and state managers should handle conflicts there. Problems handled with aversive conditioning first before animal destruction. Maintain close to federal penalties for poaching or illegal taking.

W131: Still outside interests will over-rule. Just like bison plan – good plan was taken away by public opinion, not the feds.

W143: Plans have to be flexible and be prepared to change plans as needed according to prey etc.

W146: What about economic benefits of wolves? Regarding Yellowstone… Why have a breeding pair benchmark? If wolves go up so much that they go more for livestock, then respond regardless of number of breeding pairs.

W150: Landowner should have a right to haze or kill a wolf that threatens pets, bird dogs, lion dogs, etc.

W151: wolves have become habituated to humans here because it is illegal even to haze them.

W157: They learn to run when hunted.

W171: Predators follow prey base. Don't manage for a single species. If too many deer, don't just shoot them off. Think of the big picture and predator/prey system.

W175: I like the adaptive management approach.

W178: I am concerned about the ability of people to lethally control wolves that are threatening livestock or pets.

W179: Like to see stronger penalties for illegally killing wolves.

W182: Biggest concern – definitely not in favor of public harvest.

W185: I have an issue with moving from the breeding pair to the pack of 4 to determine breeding pairs. I have a problem with harvest. I like the idea of the permits.

W189: I don't think they should be able to use lethal control or "threatening" livestock.

W190: Emphasis on non-lethal methods. Would like to see Wildlife Services excluded from this whole process. People who are managing the populations should be doing the on-the-ground work.

W192: Like #5. Think we need to move slowly 7until we work out all the problems, or until all problems are addressed.

W200: Benchmark seems more like a limit. I question if hunting wolves is necessary in general. I think wolf numbers will be controlled enough through depredation actions.

W201: Would like to start with alternative #5, go into it slowly. Eventually go into alternative #3. I feel we need wolves to regulate herds and numbers. We should

W202: I like alternative #2. I think the compensation program is very important. I think the possibility of a hunt is important as long as there are enough of them. Hunting is an excellent management tool. It would be great if there were 2000 wolves in Montana with 50 permits. I think stock growers should have the right to take care of depredating wolves (as long as guidelines are followed).

W238: 90% of problem with wolves would be eliminated if the farmer could be able to shoot them.

W263: What happens if wolf pack gets rabid? Would kill a lot of other stuff.

W296: Allow mixed classification to allow hunting and trapping both.

W324: Under #2, landowners should be able to get a kill permit that others should be able to utilize.

W326: Management plan needs to address public safety.

W343: Alternative #2 offers flexibility. Gives people more options.

W351: Leave up to landowners to manage.

W370: Guard against numbers getting too low or we get federal control.

W374: Not good to keep number of pairs at 10 because it limits ability to eliminate problem packs. Trade-off is more wolves.

W397: There will have to be control by flying them and killing.

W399: Alternative #2; wildlife management can address local concerns – good – each area's different.

W412: Alternative #4 -- why should landowner have to worry about controlling wolves? They're in the cattle business.

W473: Should have landowner kill permits with alternative #4.

W475: Concern about conservative techniques for managing wolves e.g. translocation. They don't work. Problem wolf has to be removed.

W497: Be prepared to have hunting season on wolf population, but now it is too political.

W499: Student of ecology and a farmer/rancher daughter. I can see the argument from both sides and recognize the wolf as a keystone species; however, I support the ranchers right to defend their livelihoods. I disagree with hunting/trapping wolves, but agree that ranchers should protect their property. Concerned with delisting; FWP should regulate how many wolves are taken. I support Alternatives #2 with these modifications.

W503: Hunting is acceptable with a rifle; Trapping is barbaric. I prefer a bullet.

W508: Disagree with public hunting for trophies, but agree that landowners should be able to protect their property.

W521: Prefer a mix of Alternatives. Two and four – would like to see breeding pair from alternative 4 (13 pairs) and some hunting opportunity as in Alternative 2 in certain high density areas.

W542: I support alternative 2. The draft is excellent. Allows the use of management tools in the most advantageous way. Funding for this alternative no different for other alternatives. Alternative 4 is the most expensive so not good. Alternative 2 is best compromise. Alternative 2 puts a good face on the whole program for Montana. I would compromise in the direction of alt 3 rather than alt 4.

W545: I like Alt. 2. Landowners should have flexible tools because they are the ones dealing with the wolves. If I won a business, I have the right to prosecute shoplifters. The wolf is no different than the shoplifter if he is damaging my property. I would rather have the state have authority, but if feds provide a lot of funding they will end up with more control. State doesn't have the money so what is the funding source?

W563: Alt #3 would be flexible in terms of hunting opportunities.

W564: As a livestock producer, I like Alt #2 because there is compensation, landowner flexibility to protect livestock and the fact it provides for regulated harvest.

W580: Does it really matter if the "benchmark" is 10 or 15? Because FWP is managing it and they will manage it for whatever they think is right.

W581: Is there a way to use the science of wolf behavior to better target problem animals and open up a new component to outfitter hunting?

W636: Montana's plan has to meet reintroduction goals and be driven by science.

W652: Look at other countries and how they manage wolves.

W658: Manage wolves like other species. Keep politics out – make it science based.

W660: Alternative #2 is the best mixture to meet concerns of people as FWP addresses problem and wolves.

W684: good goal – maintain viable wolf population; prey management should be balanced with wolf management.

W696: They will come into people's yards. They need to be managed accordingly.

W701: Don't oppose wolf harvest; rather see a harvest than wolf classified as a predator.

W733: I am against research that restricts the general public, but doesn't restrict researchers.

W747: Need to take a cautionary approach before utilizing hunting or trapping as a management tool.

W754: I'd like to see a reduction as the first step in tags for ungulates rather than controlling wolf numbers.

W758: I would like it better if there was no benchmark.

W761: How will the non breeding wolves be managed?

W769: How ill disease in the wolf population be addressed?

W777: I'll go with #4. I've ridden horseback since I was a kid. I'm 80 – the wolves have always been here – no problem when they were left alone; increasing them will become a problem pretty fast.

W792: I have problem with managing by a number.

W793: Manage as a predator on private ground and as game on public ground.

W802: Mange them according to the problems them create – they will go to areas where they are not being harassed and there is a prey base (elk deer etc.).

W803: Manage wolves aggressively in conflict areas (where they get in trouble).

W805: Can't micromanage wolves at the expense of other animals. Need to find a balance.

W807: I don't like to kill wolves. I don't like to take care of other people's problems – I'd rather that they aren't out there.

W812: Zone approach would be better than a numbers approach on Alternative 2.

W813: If you are going to reduce #s, concentrate on the problem wolves or potential problem wolves.

W816: Adaptive management will take a lot of intensive management. Cost a lot of $$.

W829: Does any plan address the eco-tourism side of the wolf? It's big money in the park. With that there have been management issues. How do they manage permits for wolf viewing?? Like other special permits??

W834: Wolves should be managed on federal ranges the same as on private ranges.

W837: I want the flexibility to react to problems as they occur using my judgment.

W839: Hunting is an important tool. Helps keep wolves wild.

W844: Hypothetically, what would happen if you drop below a certain # of breeding packs – what time frame to adjust? Allow flexibility to get back to 10 in certain timeframe. If below 15 pairs, quit hunting/trapping.

W860: If we start killing wolves, aren't we going to hear a "howl" from the public louder than wolves?

W870: I like alternative #4 because of low 3s of wolves; management through hunting and trapping. ESA can take a hike.

W871: Have one management plan and maintain stability of the plan.

W901: If we don't manage them now, people will take matters into their own hands.

W956: Should be able to remove a pack if it's a problem.

W985: Do you think in 5 years that you will have better scientific tools to better address the wolf and other wildlife relationships?

W995: Use a common sense approach. There has to be some way to take care of problem wolves – or the problem – sooner rather than later. I don't think you wait. You take care of the problem as soon as you can.

W1030: Economy base/employment services in Paradise Valley are in jeopardy from wolves – aggressive management plan is needed.

W1031: Where is this going to lead if don't manage like alternative 4?

W1042: No problem with wolves in the area – they just have to be controlled.

W1073: The best alternative is the one that allows the state the most flexibility and the greatest number of tools. Avoid national management.

W1098: Could there be a bounty someday? Current wolf numbers are out of control.

W1099: I like alternative #4. I like the 10 pair limit and the landowner control. Compensation program now requires proof which is difficult. Why couldn't a compensation program be written into #4?

W1057: What is the carrying capacity if they are left unchecked?

W1131: What happens when wolf populations are kept at level of 10, 15, or 20 pairs and the elk population still declines?

W1162: Public hunting of wolves is questionable. (Negative public image).

W1163: Trapping is more negative.

W1164: Trappers should have their leg in the trap?

W1192: Concerned about public image of hunters if wolves are shot.

W1197: If wolves lose their fear of man, will it be a problem?

W1207: Opportunity should be distributed throughout the range of the wolves as population allow.

W1212: I have a question concerning the definition of "breeding pair" and I'm concerned with that definition.

W1217: Biological opinions/data about wolves seems to vary among biologists. Do a better job with data collection. Get the facts straight and be consistent.

W1219: There needs to be regional variations in wolf management to address land use differences, habitat differences, and population differences (e.g. lion management).

W1220: One general statewide plan will not work for all areas.

W1221: Need to implement some sort of wolf management now as the wolf population and pack numbers continue to grow.

W1232: Sportsmen want to be involved in managing by hunting or trapping.

W1275: Wolves need to be delisted to allow management control before numbers explode here in northwest Montana. Should be hunting and trapping season and should be monitored and managed like other carnivores.

W1281: Hate to see us in a situation where what happens to wolves is like other wildlife; FWP needs to be more responsive.

W1301: All relocated wolves must have monitoring device on them (radio collar) – even under #1.

W1312: State management will maintain stable populations.

W1279: Set some quotas and goals established by the local people. It has to be based on the environment and people.

W1328: Must have an alternative for everyone. Agriculture community could live with alternative 2, but add in zones as in alternative #4 (p91); manage migrating wolves more aggressively. Must delist first.

W1350: Property and livestock owners should be able to remove problem wolves. Alternative #4 is best.
W1375: Should take a close look at zoning wolves out of eastern Montana. This could reduce flexibility in western Montana.

W1428: Once delisted, aversive conditioning an option.

W1437: Adverse to trapping of wolves as a method of harvest because it is indiscriminate and non-target animals could be captured.

W1445: Social tolerance will dictate wolf population along with habitat available.

W1448: Want to have the ability to chase the wolves away from livestock and property.

W1452: Like to see numbers fluctuate with environmental stochasticity. But might support #2 if no fixed numbers and there is more science and gathering of information from other studies and places. Only FWP control – no hunting or trapping.

W1461: Need a program to harass/discourage wolves before there is a problem and need for control.

W1464: Get private groups, university professors and students involved in collecting information on population numbers and how to discourage wolves before they become a problem.

W1473: I do not understand how you are going to manage them.

W3: 1. Alt 2 and 3 because each seems to persuade a balance between prowolf and antiwolf perspectives. 2. Alt 2 – increase breeding pair benchmark to 20 and ensure proper education for hunters taking part in wolf harvests.

W16: 1. Wolves should be removed from federal lists, but I don't believe farmers should just have a free range shot on them for interfering with their livestock, because it wouldn't only be farmers. It would be random punks shooting them because they know they could get away with it. Especially since wolves are wild animals which also need to eat much like humans. Yes, they highly affect livestock, but they're wild and it's their instinct. You can't actually help them from attacking livestock. Can't train them not to touch livestock. Wolves shouldn't be hunted. If they allow them to, sooner or later they'll be endangered.

W19: 1. Number 3 provides for a stable recovery and management system. A regulated hunt can be used if appropriate. FWP monitoring experience is more limited. Habitat connectivity is restricted; 2. 20 pairs should be a floor not a ceiling. State plan funding should be in place before implantation. Need clear standards on when wolves can be shot for preying on livestock. You should not permit it when they are just in the vicinity of livestock.

W21: Alternative 2. I am looking for FWP to manage wolf just like other wildlife. I am looking for management based on science, not politics. If one of the states fails to meet the plan request then are plan 5.

W25: 1. We should have vibrant, viable long-term conservation for wolves, and I believe Alternative 3 provides the option. Wolves can generate a lot of tourism dollars and help balance our Montana wildlife. Wolves should be managed like any other wildlife we have in MT -- elk, bears, mtn. lions, etc. 2. Let wolves act naturally in their environment. Create funding from tourism revenue to compensate ranchers who receive livestock losses. Rather than using reactive control measures (I.e. shooting, trapping), use public outreach in pro-active ways to avoid lethal measures.

W27: 1. Alternative 2 & 3. Larger #s of breeding pairs (relative to all alternatives), allowances for adaptive mgmt, compensation (but see below), shift of mgmt away from USFWS to MT FWP, consideration of prey base, consideration of livestock owners, continued monitoring. *How would monitoring be done? Concern that each of the 3 states holds to their "10 b.p." minimum in that no state perpetually operates below that minimum with the expectation that the other states will make up the difference. Also, that the agreement made by each of these 3 states' governors to accept this responsibility of a minimum of 10 bp will continue to be upheld, despite potential administration changes. 2. *Compensation issues -- 1) distinction between loss of livestock on private land v. public lands 2) potential for buying out grazing rights on land that is attractive to wolves instead of destroying every wolf that comes to that area. 3) Solicit funds for compensation from those with a vested interest in wolves (i.e. wolf supporters, cattle industry). *Increased outreach education with landowners/livestock owners to mitigate losses to wolves. *Management is science based and there is a continued partnership with FWP and universities to incr. our knowledge on wolf ecology. *# of breeding pairs should be less rigid and more flexible as more science on wolf ecology, carrying capacity becomes available. Concern that each of the 3 states holds to their "10 bp" minimum and that no state perpetually operates below that minimum with the expectation that the other sates will make up the difference. Also, that the agreement made by each of these states' governors to accept this responsibility of a minimum of 10 bp will continue to be upheld despite potential administration changes.

W38: 1. Alternative 2. Give management to the experts -- research biologists -- compensation insurance -- administrated by locals, keep legislature out. Keep compensation program going -- Defenders of Wildlife. No trapping - very controlled hunt.

W42: 2. Set a low level for wolf packs. If packs reach that low level, then management actions will be activated to protect the wolves. Do not set a high level but manage the wolves so that the low levels will not be reached. Manage the wolves to protect the low established level.

W51: 1)#4 Montana FWP should have all flexibility with any alternative. 10 packs are plenty, as fast as they breed the population will be more we need or can manage, with out hunting season on them. The feds funded the program to transplant them from Canada. They should fund the control of them. 2)Rancher and other livestock owner should have the right to protect their animals, without the threat of stiff fines.

W59: 1)#2. Current population large enough to tolerate significant control (i.e. pack removed or severe thinning in Paradise Valley, Sun River) and to significant importance elk and deer populations in Centennial Valley, Gardiner, and Beartooth Wilderness. We need to study, observe more before adding more breeding pairs. 2)Institute limited trophy hunting ASAP to increase value of wolf to ranchers, outfitters and hunters who are currently aware to the wolf.

W63: 1)Alternative #1 Local feelings are unfriendly to wolves. All other plans have breeding pair limits that are much too low. Dept. of Livestock has an adequate compensations system. I totally oppose hunting wolves, as well as bears and mountain lions. Why waste scarce state funds when we can rely on federal dollars? 2)Nothing. More action is needed at the federal level.

W65: 1)Alternative #3, I like the higher more conservative 20 pair benchmark for maximum liberal management. I prefer this alternative approach to compensation. 2) The problem benchmark numbers should include clearer more definite distribution criteria so more liberal guidelines are triggered only if we have sufficient distribution. Northwest Montana needs to have a healthy population before more liberal management is permitted. Lethal control should target specific wolves, not random wolves or entire packs. Wolves should receive greater protection on public lands. No lethal killing of "problem wolves" on public lands.

W66: 1)Alternative #2 and #3 are closest to how I would like to see wolves "managed" in Montana however, Alternative 1 also has aspects I like. 2)Compensation in #3. There should be opportunities, tools, to prevent conflicts. 20 pairs should be minimum. I can't emphasize enough how different wolves are from other species. I hope you consider that when developing a management plan.

W75: 1)Alternative #1. Due to lack of science studies to establish appropriate predator/prey ratios in given regions (biomes) 10-15-20 or whatever is an artificial number. Need more research. Gather studies or any research from Alaska, Canada, especially Minnesota, to help establish appropriate predator/prey ratios based on a given region/space. 2)I would support alternative #2 if there was no set number of breeding pairs required. Wolf populations should be based on established research/studies of seasonal/regional/prey variances. I would support #2 if all control measures were conducted/supervised by FWP. There should be no regulation by hunting/trapping.

W76: 1) #2 appears to be the most "balanced" approach. Wolves were here long before I was and will be here long after I am gone. They are truly a majestic animal, but must be regulated so as not to disrupt big game populations. Want to see hunting and trapping allowed. Thanks for the chance to comment. 2) Wolves in the Nine Mile valley do not act like wild wolves. They have been habituated to humans, thus showing little fear or concerns

when encountering humans. I think that wolves attack/kill or injure pets (dogs including lion dogs, bird dogs) should be hazed or shot and killed just like livestock attacking wolves. I would like to see "hazing" allowed when wolves come too close houses, pets or humans.

W82: 1) Alternative #3 would be best for the future of wolves and a healthy ecosystem in Montana. Wolves are needed to control other predators and keep wildlife in balance. A compensation program would help. 2) Wolves should not be geographically restricted. They should be managed like lions and bears. Wolf harvesting should be regulated to limit distribution to pack dynamics and pup rearing. Montana should work with Idaho and Wyoming for regional goals. Increase education to limit wolf/livestock interactions. No trapping or general hunting, only in problem areas.

W85: 1) Alternative #5 while we wait for all states to develop plans. Increased local involvement. 2) Avoid the "benchmark" number of 15 instead manage wolf population using numbers and pack numbers, in such a way to minimize local effects on ranging and game populations.

W86: 1) Alternative #4. This is the best to cause minimum damage and still maintain a possible large ungulate herd in western Montana to provide hunting opportunities for the residents and maintain a viable hunting industry. Actually 10 breeding pairs is way too much, but due to the ESA the wolves were forced upon us. 2) This effort should all be paid for out of the federal government and no state money or license fees should go for this effort. Also it should not be managed by the FWP but rather be managed by the Montana livestock Department. We (Montana) should be paid by the feds for lost revenue due to reduced big game hunting opportunities.

W90: 1) Alternative 2 because it will be treated as a species in need of management. I like that they will be monitored. But also that the landowners have flexible tools to respond to conflict and decrease risks. 2) Thanks for involving the public!

W93: 1) Alternative 3. Greater number of wolves restores the ecosystem to a more historic state. Also allows for greater flexibility in adaptive management. Less likelihood of stochastic environmental events and other events causing the number of breeding pairs to drop drastically such that aggressive management is needed or possible relisting required. 2) There needs to be a compensation fund in place. It seems that excluding this option is a way to deter public from supporting this alternative.

W98: 1) Alternative #4, 10 breeding pairs would ensure a viable population in Montana. More wolves that this would undoubtedly harm livestock producers. When their economic future is in doubt anyway. 2) A hunting and trapping season could be set instead of a special kill permit.

W102: 1) Alternative #2. I think would best suit Montanans' needs. Why, because wolves definitely need to be managed and controlled to certain number at all times. 2) I think there should be wolf harvest by permits for over populated areas, like there is for elk and deer and other big game animals. Compensation could come from special permits.

W103: 1) None, because right now we are already in the 10-20 breeding pairs now and problems are snowballing out of control now. If the recent control actions had not happened I think we would have been looking at a lot of loss for our industry in this area. 2) I think that if the wolf population was kept to a number that domestic problems were few and far between (like bears or lions) then we could all live with it. Also I think the funding should have been dealt with before the first wolf was set loose.

W112: Alternative #4. Less numbers, less problems. No state funds.

W116: As landowner a taxpayer and one who raises cattle, I believe that if the people want to see wolves in the National Park, fine. I believe if they leave the parks and the wilderness areas they should be considered a predator and have the same status as a coyote.

W118: 1) Mostly #2. A combo of 2 and 4. Maintain flexibility with fewer pairs. 2) Less pairs in #2 and/or consider total numbers not just pairs.

W120: 1) Alternative #2. The public has input to state and local governments and also there may be possibility for public hunting. FW&P manage wildlife and prey species now, so it is only feasible that they handle wolves. Management needs accurate counts. 2) The federal government should foot most of the bill for compensation. They insisted that we have wolves so they should help with future compensation programs.

L0126: 1) Let us get rid of all the wolves in Montana and if people want to see wolves they can go to Canada where there are a lot of them it will save us many millions of dollars. This looks like some bureaucratic waste of money for nothing.

L0001: 1) FWP preferred alternative #2 represents excellent work by these professionals, allows them to use their management tools most efficiently. Get ahead of the curve, let Idaho and Wyoming look like sour pusses. Let's use alternative #2 till we reach a future natural balance then fine tune from there. 2) I think Alternative 2 is best choice – then if we need to compromise or fine tune, compromise in direction of alternative #3, not 4 which is way too radical, heavy handed and doesn't use the FWP to the best of its use.

L0023: I ask that you not allow citizen-shootings or poisonings of wolves under any circumstances. It is important to keep game levels adequate – wolves do diminish stock of elk and deer, and not being an expert, I ask only that you allow wolves to take their fair share. I would prefer you choose option #3, and I actually hope you expand the breeding pairs allowable. Man, with a little effort, can learn to live with wolves and they would be wonderful to see and hear on one of my trips to Montana. My second choice would be the alternative now preferred by you, option #2. I am adamantly opposed to both options #1 and #4. The wolf is part of the reason I love Montana and spend my vacation money there – it's natural, unlike Chicago where I live. I am not opposed to paying double the amounts for licenses to fund a program that maintains a healthy wolf population in your state. I will consider visiting elsewhere (British Columbia for example) if you adopt a program that deals too harshly with the gray wolves.

L0026: They are an important part of the ecosystem, and have a right to their place on the planet as do all living things. Certainly farmer and rancher have a right to protect their cows, sheep and other livestock. So my proposal is that wolves can only be killed when a farmer or rancher seems them attacking his livestock, or an attack is imminent. The farmer or rancher must then report the killing and/or sighting of the wolf in the vicinity of his livestock to the appropriate FWP agent. Only with these strict rules can we hope to save the wolf from those who wish to exterminate this beautiful animal.

L0029: Manage the wolf as a game animal.

L0036: Of the alternatives presented, only "No Action" appears to satisfy the basic legal and biological requirements of the Endangered Species Act. Any action alternative should, in my mind, adopt the principles of sound conservation biology. FWP should not adopt a wolf conservation and management program until these minimum standards have been met. Until that time, wolves should remain on the endangered species list and the U.S. Fish and Wildlife Service should continue to manage wolves in Montana. A benchmark of 15 pairs, 20 breeding pairs, or 10 breeding pairs in Montana each fail to achieve minimum viable population levels. Neither will an agreement with federal authorities to employ the Advisory Council's recommendations to manage wolves and resolve wolf-related conflicts achieve viable population levels. Wolves may have met federal "recovery goals", however these goals do not accurately represent a recovered population. USFWS has not conducted a population viability study based on scientific evidence. The arbitrary "15 pack" level proposed in the preferred alternative is simply a number that has been assigned and has not been tested and proven to produce a viable wolf population. Wolves exist in 10% of their native range. Scientific studies must be conducted to determine what level of occupation and distribution of their native territories constitutes "significant" distribution levels. These studies have not yet been conducted. The scientific literature on long-term viability for genetic concerns alone requires an effective breeding population size of at least 500, which translates into total population size in the thousands. No sustainable mortality level has been calculated. And no analysis of migration corridors needed to maintain adequate levels of genetic interchange throughout the region has been prepared. To date, wolf recovery and management in the Northern Rockies has been politically driven. Until there is an adequate consideration of the best available science, as required by the Endangered Species Act, the No Action Alternative is the only option that satisfies the minimum biological and legal requirements of the Act.

L0040: The plan must include and adopt a wolf conservation and management plan. If not, all the effort, people, hours and hard work to bring them back will be in vain. Make sure there are strict guidelines for illegal wolf kills. Keep large uninhabited areas for them, and make special provisions for times in the season when pups are born. Don't let what Wyoming is doing to the wolves happen to yours, have better plans in place for the wolves. And there has to be boundaries on were the livestock can graze. Let the wolves have some habitat were grazing is not allowed. The rancher's cannot be allowed to have control over public wild land. Wolves have more rights in this habitat. Please put long-term conservation and protection for them please to think about being alive on this planet without wolves also is unthinkable for me. I urge you to put right fair provisions in place and do not allow public hunting or trapping of them. Please ban this forever.

L0046: Please put me down as another MT citizen in favor of a designated hunting season for wolves for both rifle and bow hunters. As with black bear or mountain lion, a drawing would be appropriate. It should NOT, however, be limited to 2 wolves per year.

L0057: I believe that wolves should be managed like other wildlife, such as elk, bears, and mountain lions. They should not be managed as if they were livestock. There should be no artificial limits on population or location for wolves. Also, the minimum number of breeding pairs should be at least 20 or more as outlined in Alternative 3 of the draft plan, to assure long-term survival. Provisions for the killing of wolves by citizens should be clear and specific, permitted only when wolves pose an immediate threat to people, pets, and livestock. I think that funding for state wolf management should be assured before the plan is finalized. Key areas of habitat should be protected during denning season. It should maintain large, wild areas where wolves and their natural prey are secure from excessive disturbance from people. They need their own territory. Wolf-related tourism brings in revenue to the hotels, restaurants, shops, and guides in communities surrounding the Park, much of it during their off-season. Wolves are responsible for less than 1% of livestock losses. Wolves also promote a balanced carnivore community. The presence of wolves in Yellowstone National Park has created a more diverse and even grizzly bear feed on wolf kills. At the same time, wolves have reduced the number of coyotes in the Park, allowing other predators the opportunity to fill the ecological vacuum. The best choice seems to be alternative 3. It makes the wolf as a species in need of management, providing full legal protection for wolves. It has the highest population benchmark before aggressive management tools are used. This is set at 20 breeding pairs. I think that this should be the very minimum for the wolves' self-preservation. It also set clear and specific rules for when citizens can kill wolves that are threatening people, pets, and livestock. Wolves are wonderful valuable animals as individuals and they are also an important part of the scheme of things where nature is concerned. Please see that they are valued, protected and taken care of on a permanent basis.

L0070: Montana FWP's preferred alternative, called the Updated Council Alternative, to managing wolves upon delisting would take some good actions in ensuring that wolves successfully remain in the state in healthy numbers. In particular, I believe that requirements to maintain wolf-travel links between Montana, Wyoming, and Canada will be a sound management practice. This provision, however, needs to be extended to Idaho as well, as wolf movement between Montana and Idaho will also ensure that they remain healthy in the state. Since the process began, FWP has done a great job making sure that the public has had a hand in the planning by carrying out the required meetings and public comment periods. Continued public involvement and feedback will be key in making sure that this plan is successful because if the public isn't happy with it, its chance for success drops. FWP seems to recognize this very well, but it doesn't seem that they recognize the need for other kinds of public involvement. By this I mean that the public needs to be involved not just by giving feedback, but in education about wolves and their important roles in the ecosystem. They long held and horribly mistaken belief that wolves are dangerous and bloodthirsty predatory needs to be changed if the state is going to pay such close attention to public views. These erroneous beliefs are not based on fact, and so the management of wolves cannot be based on these unfounded fears. FWP's preferred alternative seems designed to simply keep wolves from becoming endangered again and not necessarily ensuring their full recovery or biological success. The first major flaw I see is in setting the management benchmark at 15 breeding pairs. In light of (the) estimate that there are currently 14 breeding pairs in Montana, this allows for little growth before heavy-handed management can step in to remove, kill and rearrange. This also implies that the number is based on pacifying special interest groups like ranchers and hunters, rather than allowing growth when the ecosystems of Montana can surly support more than this number (as the Additional Wolf Alternative implies with a benchmark of 20 breeding pairs). Instead, a minimum number should be set, perhaps at 20, but wolves should be allowed to grow well beyond that, limited only by what the ecosystem can support. Nature will surely be better than humans at deciding how many wolves are permissible. The second serious problem that I find with the preferred alternative is that it does not outline appropriate ways to handle the concerns of ranchers and livestock depredation. Emphasis needs to be placed on preventative measures, such as electric fences or guard animals, rather than management when an incident of depredation occurs. Depredation by wolves does occur, but when the numbers are examined, it becomes clear that ranchers blow the losses way out of proportion. Because of all of this, the plan to manage wolves needs to recognize that ranchers take on certain risks, and wolves should not be killed for a few lost livestock. Instead, management needs to occur heavily at the prevention level, changing human behaviors and not killing wolves only when the incidents occur. This doesn’t work, as more wolves will move into the area, setting up a cycle of needless killing and frustrated management. The final part of the preferred alternative that I feel will not ensure the long-term success of wolves in Montana is the provision that will allow wolves to be hunted when they reach sustainable levels. With all of the work and money that has gone into reintroducing wolves and making sure they are successful, this seems like a giant step backwards, reminiscent of the days of bounty hunting and extermination. In addition, this just seems to be an attempt at pacifying another special

interest group that feels wolves are taking away from their game animals. This is another area where there needs to be much more public education on the important roles wolves play in ecosystem health. The management plan should not allow for hunting of wolves, and instead should seek to educate the public, especially hunters, on the benefits that wolves can actually provide for them.

L0085: My concern is for a workable long-term wolf conservation. Please develop a plan that includes funding of the state program. Provisions for when citizens are allowed to kill wolves should be clear and specific, permitted only when wolves pose an immediate threat to livestock. The minimum number of breeding pairs should be at least 20 and wolves should be managed like other wildlife with no artificial boundaries or limits. Montana is a great area as its wolf population makes it even better. Thank you for assuring a future for wildlife.

L0093: Regarding wolf management, I'd like to point out the following: 1) Funding of the state program must be assured before the plan in finalized. 2) Provisions for when citizens are allowed to kill wolves should be clear and specific, permitted only when wolves pose an immediate threat to livestock. 3) The minimum number of breeding pairs should be at least 20, as outlined in Alternative 3 of the draft plan, to assure long-term survival. 4) Wolves should be managed like other wildlife, such as elk, bear and mountain lion, with no artificial limits on wolf numbers or boundaries. Wolves are good for Montana's ecology, economy, and culture. Wolves in Montana: Promote healthy big game populations; Generate $20 million in tourism (NPS); Manage coyote and other predator numbers; and, Cause less that one percent of all livestock losses annually (Montana Agriculture Statistics Service).

L0121: Even though Alternative 2 does not fully come into agreement with me- it comes the closest. The other alternatives are filled with issues too controlled by the federal government this forcing one to choose this alternative. Number 2 is the least restrictive with some issues I'll comment on. I feel our MFWP can manage and address the wolf management concerns well with out federal intervention. My two biggest concerns with Alternative 2 are in the area of FUNDING and WOLF HARVEST. I don't know where all our funding will come from but hopefully huge money groups such as Ted Turner, Defenders of Wildlife etc. will not be allowed to influence our people in FWP or at the legislative level. Possibly the wolf tags for hunting and trapping would generate monies strictly for wolf management/harvest. Due to constant monitoring needed to appease pro-wolf groups there'd be a demand for extra funds. Why not have a "Wolf" license plate for the state of Montana so that those who so desired to support wolf management whether for hunting, trapping, sightseeing could support this with all the monies to go to the wolf management program. Similar to the park plates. It would be desirable to have wolf education programs to educate the public with documentaries showing all aspects of the wolf- birth to death. But tell the whole truth not just the fuzzies about them. There's a need to get on with our program NOW by also classifying the wolf as a furbearer OR big game animal. I could see the lack of doing this delaying our de-listing by months/years! There definitely needs to be a regulated wolf harvest on the Alternative # 2 not leaving the word possible there.

L0150: 1)The wolf should be eliminated; this was the dumbest idea that they (FWP) has had since the ferret and the prairie dogs. 2)It should be put into affect right away.

L0160: Would like to see the state install the same type of regulations that would follow the great insight of the state of Wyoming so that land owners and concerned citizens could shoot at will all wolves that are seen on public or private land other than certain national parks and state wildernesses, designated as safe havens for them. History itself should be enough reason to pass such laws. 31 of 48 said they will carry their weapons with them in an attempt to eliminate every wolf they see. So you can see that many are willing to become outlaws to try in what might be a futile attempt to slow the slaughter of our precious game animals. I hope you decision aligns with ours. We really don't want to beak any laws, so think about passing laws we can all accept, not just the environmentalists.

L0182: 1)Alternative #2 in the end. #5 for now. The wolves should be controlled per harvest. 2). N/A.

L0183: Thank you for the opportunity to comment on the Montana Gray Wolf Conservation and Management Plan Draft Environmental Impact Statement (Draft EIS). Please accept these comments on behalf of Predator Conservation Alliance (PCA), a non-profit wildlife conservation group based in Bozeman, Montana, working to improve coexistence between people and predatory wildlife in the U.S. northern Rockies and High Plains. Predator Conservation Alliance includes 1000 members nationwide, including more than 100 Montana residents, who greatly value the restoration of a healthy wolf population distributed across suitable habitat in Montana and throughout the northern Rocky Mountain region. We appreciate the opportunity to comment, and we support many aspects of the Preferred Alternative described in the Draft EIS, which we believe is a solid first step toward this goal.

PCA's overall position

PCA supports a modified Alternative 3 that includes a compensation program for wolf depredations as described in the Preferred Alternative (Alternative 2), because we believe that this best ensures long-term wolf restoration in Montana. In addition to the additional breeding pairs proposed in Alternative 3 — which would provide an important extra safety margin between endangered versus liberally controlled and hunted — PCA also favors the proposed "annual workshop and interagency coordination meeting" over the "standing advisory council" format for future wolf management decisions in Montana, because we believe that the former is more democratic, provides easier access for the concerned public, and there is a successful precedent for this format embodied in the Interagency Grizzly Bear Committee.

PCA's specific comments

As mentioned above, PCA supports many aspects of the Preferred Alternative as a strong start toward successful long-term management of wolves in Montana. First off, PCA supports and appreciates the acknowledgement in the first paragraph of the Preferred Alternative that "wolf restoration is fundamentally consistent with Montana's history of wildlife restoration and conservation" (p. 69). PCA looks forward to the day when wolf populations are healthy and widely distributed in Montana and across the U.S. northern Rocky Mountain region such that wolves can be managed like other healthy wildlife species, including elk, black bears, and mountain lions, for example. PCA also supports and appreciates the following fundamental strengths of the Preferred Alternative:

•No artificial limits on maximum wolf numbers in Montana
•No artificial boundaries that exclude wolves from suitable habitat in Montana
•No immediate hunting of wolves following delisting (we support the proposed "species in need of management" designation).

PCA urges the following improvements in the Preferred Alternative:

•Population Goal — We support and appreciate the revised population goal from 15 "packs" to 15 "successfully breeding pairs" of wolves in Montana, since reproduction is the key parameter to measure the conservation status of a population, but as mentioned in our initial comments we urge that this goal be increased to 20 breeding packs, as proposed in Alternative 3. As mentioned above, this would provide an extra safety margin between

endangered versus liberally controlled and hunted, which is especially important since Montana harbors all of the northwestern Montana wolf population, plus part of the Greater Yellowstone population, and perhaps even one or more wolf packs associated with the central Idaho wolf population: each of which must be managed in excess of ten breeding pairs to ensure long-term wolf viability. Montana also contains much of the key habitat that connects these three populations, so additional wolf packs in Montana would also enhance the probability of successful connections between the three populations, the importance of which is described well in the Draft EIS (p. 31).
•Habitat Protections — We acknowledge that Montana FWP has limited authority over the management of many areas of wolf habitat, but the same holds true for elk, and we submit that FWP has been a powerful force in ensuring the long-term protection of many areas of habitat vital to elk productivity. In this same manner, we urge FWP to be a firm advocate for protecting habitat for wolves, especially in those many cases where such protections will have cascading benefits for a full suite of wildlife and the ecosystems of which they are a part. As mentioned in our scoping comments, FWP should work with land managers to keep unroaded areas unroaded (since wolves are typically killed in close proximity to a road); restore roaded areas to a maximum road density of 0.9 miles per square mile or less (as recommended by the best available science regarding the effects of roads on wolves), and provide special protections for wolf den sites during the few months in the spring when those sites are active.
•Mortality Protections — As mentioned in our scoping comments, PCA believes that until minimum wolf recovery goals are at least doubled and 20 breeding pairs are achieved in Montana, private citizens should not be allowed to kill a wolf unless it poses an immediate threat to human life or livestock. We appreciate the language in the Preferred Alternative that emphasizes non-lethal means to manage wolves below 15 breeding pairs (p. 73), but again we urge that this threshold be increased to 20 breeding pairs. We oppose the issuance of "FWP kill permits" that do not specifically target offending wolves only. Similarly, we oppose hunting and trapping of a wolf population below at least 20 breeding pairs that is not selective against specific depredating wolves.
•Conflict Management — We appreciate that FWP will have the ultimate responsibility for resolving wolf/livestock conflicts as described in the Preferred Alternative (p. 76). To ensure that the concerns of livestock producers are balanced with the needs of wolf conservation, PCA urges an active presence by FWP officers on the ground where conflicts occur, in addition to contracting with field personnel from USDA Wildlife Services and Montana Department of Livestock.
•Compensation — As mentioned above, PCA urges FWP to adopt a compensation program that reimburses livestock producers for confirmed and probable losses due to wolves, because we believe that this type of program helps to build tolerance for wolves, and can provide a means by which the people who benefit from wolves can help to share the costs of wolves. We support a compensation program that emphasizes prevention of conflicts, in addition to reimbursement of conflicts after they happen, perhaps modeled after an insurance policy where livestock producers have a positive incentive to reform their livestock practices in cases where it may reduce their risk of losses due to wolves.
•Administration/Delisting — As mentioned above, PCA supports an annual workshop and interagency coordination meeting to address long-term wolf management in Montana as described in Alternative 3 (p. 88). PCA and many other groups and individuals with interest and expertise in wolves have had limited access to influencing the development of Montana's wolf policy by the advisory council. We appreciate the Council's hard work thus far that has contributed to a plan that we largely support, but we would appreciate a more democratic process for Montana's wolf policy in future. Also as mentioned above, one model for public participation is the Interagency Grizzly Bear Committee, which holds regular meetings between land and wildlife agency officials where the public is invited to attend and participate.
•Information/Public Outreach — A long-term commitment to wolf education and outreach is vital to a successful wolf management program in Montana, and as mentioned in our scoping comments, PCA offers to work with FWP to develop and distribute factual, science-based information about wolves in the U.S. northern Rockies via printed materials, presentations, media events, school programs, and other outreach efforts.
•Funding — PCA acknowledges the difficulty of funding management programs for wolves and other non-game species in Montana, and we appreciate FWP's commitment in the draft EIS to secure this funding. We are convinced that the economic benefits of wolves far outweigh the costs, but creative solutions are needed to capture these benefits to compensate those people who incur the costs, and to fund long-term wolf management. Some initial ideas to consider might include a wolf license plate, to generate revenue for wolves and other non-game species, and a wolf visitor center with wolf-related merchandise, that could fulfill a dual function of education and a revenue source for wolves. Prototypes for the latter include the Lewis and Clark Visitor Center in Great Falls, and the bighorn sheep visitor center in Dubois, Wyoming. PCA also supports and appreciates FWP's efforts to secure federal appropriations to help offset the costs of managing both wolves and grizzly bears, two outstanding natural resources of our region with national and world-wide significance. Finally, PCA believes that the costs to manage wolves should decline once they are fully restored in Montana, whereupon they no longer need to be intensively managed and monitored, and management costs should be comparable to current expenditures on bears and mountain lions.
Additional comments

PCA would like to take this opportunity to comment on FWP's wolf policy outside the immediate scope of this plan:
•Wyoming's Wolf Policy — In addition to completing its own wolf management plan, PCA urges the Montana Department of Fish, Wildlife and Parks to do what it can to improve Wyoming's current wolf policy, which we believe presents a serious obstacle to de-listing because of the proposed designation of wolves as "predators" with no protections throughout most of the state. We applaud the Montana FWP Commission and Montana's governor for their work in this regard thus far, and we urge that these efforts be redoubled until Wyoming can be convinced to improve its policy.
•U.S. Fish and Wildlife Service's National Wolf Reclassification Policy — PCA also has concerns that the U.S. Fish and Wildlife Service's proposed expansion of the wolf recovery program for the U.S. northern Rockies to include nine western states — most of which have no wolves and no wolf protections — may present a further obstacle to the timely delisting of wolves in the northern Rocky Mountain region. We urge Montana FWP to convince the U.S. Fish and Wildlife Service to confine its de-listing proposal to the three-state area of the northern Rockies where wolves are biologically recovered.
Thank you and the governor for your work to develop a program that will ensure the restoration of wolves to suitable habitat in Montana, for the opportunity for PCA to comment, and please continue to keep us informed of any developments.

L0184: I agree that the preferred alternative with the adaptive management concept is an appropriate management direction for Montana. It is appropriate to recognize the tribes' authority on the seven reservations in Montana but it also raises a question about the adaptive management concept. Since the tribes have wolf conservation and management responsibilities on the reservations does FWP intend to count wolf packs that occur on reservations when tallying numbers that signal changes in adaptive management strategies? If wolves are no longer protected by federal regulations a tribe could conceivably adopt any management strategy it chooses on its reservation. Tribes may choose a management strategy far less conservative than that indicated by the state's adaptive management process. It may be necessary to negotiate formal agreements with Indian tribes to coordinate monitoring, management and regulated harvest of wolves to ensure the effectiveness of a statewide management strategy.

L0187: 1)Alternative 2 best covers what Bangs and the state of Montana biologist proposed. They stated 10 established packs in state prior to a regulated wolf harvest. Wolves are in excess of this number so Montana has the responsibility to manage now. 2)Regulated wolf harvest.

L0190: Any wolf plan to introduce wolves into eastern Montana would be extremely detrimental to stock growers and landowners. Hunting is also a large factor in the local economy. The business that rely on the thousands of hunters that visit our area each hunting season would be severely affected by introducing wolves. Landowners that withdraw their acreages from the block management program and landowners that close private lands to hunting would greatly affect the economy of the central Montana area. We strongly urge no consideration be given to introducing the Montana gray wolf in eastern Montana.

L0228: Agriculture represents a major portion of Garfield Counties economic stability; Wolves have historically been detrimental to animal agriculture. We disapprove of reintroduction of wolves to Garfield County.

L0229: We support alternative 3 because it sets the number of breeding pairs at 20 before changing management strategies from conservative to liberal, provides full legal protection for wolves and sets clear and specific rules for when citizens can kill wolves that are threatening livestock.

L0205: 1)Alternative #5. This alternative has the most flexible strategy, keeps more management options open. It will insure a 90/10 financial split with the feds. Alt. #2 is reasonable and flexible enough to keep wolf recovered. Alt. #1 keeps the wolf listed, which is not good. Alt. 4 sets the sideboards too narrow for a species with a highly variable reproduction potential. Alt. 3 is "perfect" but we don't work in a perfect world. It's unreasonable due to social tolerance limits. 2)Federal money always comes with strings attached. MT cannot afford to shoulder the burden alone. For a national resource protected by a national mandate.

L0208: 1)They should eliminate every wolf in the state. They are devastating the elk herds and calves. Moose populations have declined. 2)I would implement the 3'S shoot shovel and shut up.
L0219: 1)#2 updated council. Like compensation program for ranchers. Like FWP control. Like future prospects for predator management, hunting, trapping. Like balanced scientifically based approach. 2)Please continue to study the impacts of wolf introduction on hunting elk populations and impact on outfitters. If further research shows impacts, develop mitigations measures.

L0229: We support alternative 3 because it sets the number of breeding pairs at 20 before changing management strategies from conservative to liberal, provides full legal protection for wolves and sets clear and specific rules for when citizens can kill wolves that are threatening livestock.

L0233: Blend of alternatives #2 and #4 best represent my concerns. Least amount of wolves. 15 breeding pairs are too many wolves. I see no reason for the state of Montana to assume responsibility for harboring 50% of the required total. Wolves should be monitored aggressively and that a cap of 11 or 12 pairs is more in line with our share of the burden placed on the states. Should be managed to Parks, wilderness or backcountry areas. Major concerns is the lack of credibility with federal wolf managers. Montana should assume all responsibilities within our state. Removal of excess wolves or those causing stress/harm to livestock. Assume the responsibility for investigation of landowner complaints and take immediate action. Pay compensation directly. The state should be the entity to create and follow this definition. Investigate whatever funds available form the federal level. Do not believe that a partnership with private organizations is a good idea. Some form of tax benefit should be created for those who suffer from wolf predation. Issue "kill permits" when needed. No penalty for landowners defending livestock or pets under harassment from wolves. 4 wolves traveling together in the winter is very lenient. Two wolves traveling together are probably a breeding pair during the winter. No special protective treatment on private property, does not mean they can be killed on site, but no measure that would restrict landowner from his rights. I do not believe that wolves should be tolerated on wildlife management areas. I do not want to see my money spent on feeding the wolves. I do not want to see any road closures due to wolves. I really don't care about hunting wolves.

L0234: It was unanimously decided by the club to reject all 5 alternatives. We want the wolf to be declared an unmanaged predator with the same rules and regulations as those of other unmanaged predators such as coyotes.

L0237: I concur with the MSSA position on the wolf EIS

L0239: On behalf of the National Wildlife Federation (NWF), please accept these comments on Montana's Draft Wolf Conservation and Management Plan. The NWF was founded in 1936 as the national voice of state and local conservation groups, and has since emerged as the nation's foremost grassroots conservation organization, leading an integrated network of members and supporters and 47 affiliated organizations throughout the United States and its territories. We appreciate the opportunity to comment on a plan that we think not only addresses wolf management issues, but also helps to build broader public support for wolf conservation.

From the outset of the roundtable process, the efforts of the Montana Department of Fish, Wildlife and Parks (MDFWP) to craft an adequate plan for wolf management have recognized that building support for wolf conservation requires not only the incorporation of good wildlife science, but also the acceptance of wolves by the larger public. The roundtable process brought a diverse group of stakeholders together, and through the MDFWP's leadership, an adequate and thorough management plan emerged. The process itself helped develop a broad base of support for the state plan that will greatly help in the transition from federal to state management of wolves.

The National Wildlife Federation endorses Alternative 3. This adopts the Wolf Management Advisory Council's Planning Document, but increases the number of breeding pairs that triggers a change from conservative to more liberal management tools from at least 15 to 20. The state plan relies almost entirely on a population objective based on number of breeding pairs and includes, for example, no specific requirements for geographic distribution of these pairs. We believe that it is important that wolves be allowed to thrive in many areas of Montana and, if specific geographic distribution criteria are not part of the plan, that a larger number of breeding pairs may be an adequate surrogate to assure an adequate distribution of wolves across the state.

We strongly support many parts of the draft plan that are common to both alternatives 2 and 3. Specifically, we agree with the following.

- No artificial ceiling of wolf numbers in Montana.
- No boundaries that exclude wolves from suitable habitat in Montana.
- No immediate hunting of wolves following de-listing (we support the proposed "species in need of management" designation).

The plan should not allow private citizens to kill a wolf unless it poses an immediate threat to human life, livestock, or other property. Stewardship methods that reduce conflicts should be implemented before lethal control measures. Control measures should be selective against offending wolves only.

We agree that an adequate compensation program for livestock losses to wolf predation is a key element in establishing social tolerance for wolves and other predators that can adversely affect livestock producers. The current plan sidesteps the details of how to accomplish this program and establishes only a process to this end. We believe that ultimately a state-funded compensation program, similar to Wyoming's, will be the most workable solution. We believe this should be funded from the general fund and not from hunter fees.

We are pleased that the plan includes a section on Recreational and Social Values associated with wolves and other species (Chapter 2). It is unfortunate that more information on the consumptive values associated with wolves and similar species is not available for areas other than National Parks. We hope that this deficiency can be corrected with more broadly based studies in Montana.

Finally, we believe some thought should be given to greater coordination with the states of Idaho and Wyoming. Efforts by wildlife professionals in Wyoming to develop a plan that will meet the Endangered Species Act's (ESA's) requirement for adequate regulatory mechanisms are frequently frustrated by ill-informed intransigence at the political level. Montana should continue to try to influence Wyoming and Idaho to assure that appropriate regulatory mechanisms are in place throughout the three-state region. All three states should work together to ensure that wolf numbers remain healthy and well beyond levels that would trigger a debate over relisting the species under the ESA. Specifically, Montana should pressure Wyoming to pass legislation similar to Montana's SB163.

Thank you for the opportunity to comment, and please keep us informed of any developments.

L0241: On behalf the 200,000 members and supporters of The Fund for Animals (The Fund) nationwide, including our members who reside and recreate in the state of Montana, please accept the following comments on the Draft Environmental Impact Statement/Montana Gray Wolf Conservation and Management Plan (DEIS).

To preface our comments, The Fund supports Alternative 1, the "No Action" alternative. We contend that wolves should remain under federal jurisdiction at this time due to the demonstrated disinclination or inability of decision-makers within Montana, Idaho and Wyoming (the three states currently inhabited by the northern Rockies wolf population) to afford predator species in general, and wolves specifically, adequate protection. Nothing could better exemplify this problem than the state wolf plans developed by Idaho and Wyoming to date and many provisions within this DEIS. In fact, statements throughout the DEIS reveal that prejudice against wolves still flourishes among certain segments of the Montana citizenry and even festers within the very department seeking management authority for these animals.

On the one hand, the DEIS touts the importance of Montana's agricultural and wildlife conservation heritage by declaring that the "rural characteristics of one affirm the other" (DEIS, p. 59); on the other hand, there is relatively little acknowledgement that it is precisely these two sectors of the population (ranching and hunting/trapping interests) that were in the past responsible for wolf extirpation, and are today creating obstacles to long-term recovery and viability of wolves. Despite the time that has elapsed since wolves were extirpated from the region and the knowledge we have acquired about their ecological importance in the interim, it is painfully obvious that the interests responsible for their extirpation in the first place have a stranglehold on management direction for the future. In fact, the DEIS unjustifiably focuses almost entirely on management practices that will satisfy the concerns and allay the fears of this minority within the Montana population. For all intents and purposes, FWP has lost sight of the needs of wolves. Furthermore, the DEIS fails to objectively and comprehensively evaluate the economic importance and environmental impacts of livestock ranching both locally and regionally, assuming wrongly that the loss of agricultural enterprises in certain areas will automatically translate into adverse impacts on wildlife conservation.

Until state agencies charged with wildlife conservation demonstrate that they are, so to speak, capable of "taking the bull by the horns" in order to manage wolves and other imperiled wildlife responsibly, we contend that federal agencies must maintain management authority for these species. However, we offer the following comments for consideration, if and when, the state of Montana assumes management authority for wolves.

While the DEIS acknowledges that wolf management will not be easy (DEIS, p.69), management will be impossible without sufficient, dependable and sustained funding. Yet, according to the DEIS, implementation of Alternative 2 (Updated Council), FWP's preferred alternative, and all other alternatives other than Alternative 1 is contingent upon securing adequate funding for each of the program elements. Until such time as the state of Montana can assure the United States Fish and Wildlife Service (USFWS) that it has guaranteed funding for the purpose of implementing all the elements of a responsible state management program, it is premature to even consider transferring management authority to the state. The welfare of wolves cannot be based on pipe dreams. If the state of Montana wants the public to take its management proposals seriously, then it must identify how it will fund the provisions of the proposals.

Even placing aside this conspicuous deficiency, all alternatives other than Alternative 1 in the DEIS are filled with so many unknowns that it is impossible for the public to evaluate the environmental and cumulative impacts of what is being proposed. The following excerpts from the preferred alternative (with emphases added) illustrate a few of the numerous uncertainties within the plan:

 "As part of the tri- state coordination effort, Montana 'may' seek an agreement or MOU with Idaho and Wyoming to clarify which state counts which wolf `packs within the context of their state's management program so that all wolf packs count toward the tri-state recovery requirement and individual packs are not missed or counted twice" (DEIS, p. 74)

 "When the wolf population no longer fits the definition of a species 'in need of management' or when wolf numbers have increased and population regulation is needed, the FWP Commission 'may' reclassify the wolf as a big game animal 'or' a furbearer." (DEIS, p. 73)

 "FWP 'may' re-examine the current 72-hour reporting requirement (MCA 87-3-130) when a wolf is killed or injured in defense of life or property." (DEIS, p74)

 "If reliable data indicate that a local prey population is significantly impacted by wolf predation in conjunction with other environmental factors, FWP would 'consider' reducing wolf pack size." (DEIS, p.75)

 "FWP will intensify ungulate monitoring efforts and 'consider' habitat enhancement projects where wolf packs are established." (DEIS, p.75)

 In reference to the term "threatening to kill" – "Formal definitions of these terms 'may' be adopted during subsequent administrative rule-making through the FWP Commission." (DEIS, p. 81)

If FWP expects the public to offer informed comment, it must know precisely how the state of Montana will manage wolves, not how it "may" manage them or what it "may consider." The omission or inclusion of certain provisions of a management plan may have significant impacts on the plan's success or failure. Likewise, the public must fully understand the criteria used by the FWP to make management decisions. What will trigger a change in classification for wolves? What constitutes "reliable" data and "significant" impacts to prey populations? Formal definitions of essential terms, such as "threatening to kill," must be known prior to evaluating impacts. The DEIS frankly does not provide the clarity and specificity needed for the public to even begin to assess the appropriateness and adequacy of Montana's preferred alternative or other alternatives.

Similar deficiencies permeate the document. For example, research and monitoring needs are not definitively described, are contingent upon funding availability and appear to be biased toward wolf interactions with wild ungulates because of the hunting and outfitting community's unfounded trepidation that wolves will compete with sport hunters for certain "game" species. Such pathetic drivel depicts the true colors of many self-proclaimed

hunter "conservationists" whose justifications for hunting, although never sound, are now being appropriately questioned by a growing number of members of the general public.

For years, hunters boasted that they were merely substituting for the role of natural predators no longer present in many ecosystems. Allegedly, hunting was a management tool to keep prey (read:game) populations in check, and although the argument is fallacious for several reasons, it was tragically persuasive. However, the public is now seeing many hunters in a new light – one that is less favorable because these same individuals are now concerned that the presence and expansion of natural predators such as wolves may impact their recreational pursuits. Today, these "conservationists" are clamoring for the removal or restriction of wolves. Such efforts will undoubtedly backfire, resulting in further erosion of hunter support. If FWP officials elect to cater to the anti-ecological demands of these individuals, they will, despite claims to the contrary, abandon ecological principles of wildlife management to placate a constituency for political, rather than sound scientific, reasons.

Based upon statements throughout the DEIS, it is evident that this is precisely the misguided direction that FWP is heading. Not only is it biologically and ecologically unjustified to even consider opening a hunting season on a predator species only beginning to be restored marginally to its historic range, but for FWP to contemplate opening a hunting season on wolves in order to generate revenue to assist underwriting the cost of management goes beyond the pale and insults the public's intelligence. (DEIS, p.54) Such a proposal adds substantiation to the growing criticism launched against wildlife agencies. They are essentially nothing more than commercial operations more concerned about supplying recreational targets for a dwindling constituency than meeting the real needs of the more than 90% of wildlife species that are not exploited by hunters, trappers or anglers. Boasting about the restoration of a few token species, such as elk, is a far cry from addressing the serious challenges facing wildlife today.

The limited amount of revenue generated by the sale of a few wolf hunting/trapping licenses will be more than offset by the created need for more law enforcement efforts to regulate another hunting/trapping season and to ensure that opening that season doesn't open the door to even more illegal killing of wolves than already occurs. Legal hunting/trapping actually provides a degree of cover for illegal hunting/trapping and the limited revenue from the sale of a few additional licenses will not begin to pay for necessary increased enforcement.

Of course, the more fundamental problem with a proposal of this nature is that it perpetuates the problem associated with most state wildlife agencies' funding schemes – i.e., they have historically and continue to rely on the sale of licenses as a primary source of funding their operating budgets. Not only is this foolhardy given the changing attitudes, values and demographics in today's society, but it accounts for the abject failure to address the urgent needs of "non-game" and imperiled species. While existing monies must be better spent and the funding base for wildlife agencies expanded, it is also necessary for the decisions made by wildlife officials to genuinely reflect the interests of all wildlife enthusiasts, not just the minority who engage in hunting and/or trapping activities. Is it any wonder that there is a fundamental distrust of state wildlife agencies when the majority of the populace has virtually no voice in wildlife decision-making and its concerns routinely fall on deaf ears?

To make matters worse, state wildlife agencies ignore the huge contribution to wildlife conservation made by the general public who supports and pays for countless wildlife and habitat programs on the hundreds of millions of acres of national park lands, national forests, national refuges and lands administered by the Bureau of Land Management. Rarely, if at all, do agency officials acknowledge the millions of acres of privately owned land where wildlife is preserved (not hunted and killed) and ecosystems are healthy and thriving. Furthermore, more than half of all the excise taxes collected on guns and designated for the wildlife restoration under the Pittman-Robertson Act are derived from the sales of pistols and revolvers – generally not used to hunt. Couple these monies with other examples of revenue sources such as user fees and truly voluntary financial contributions such as non-game tax check-offs, private contributions, etc. and it is startlingly clear that non-hunters do indeed contribute enormously to the preservation and protection of wildlife and wildlife habitat. Yet the typical message echoed by state wildlife officials is that "sportsmen" pay for conservation. This prejudiced attitude tends to reinforce the perception that wildlife agencies are simply extensions of the hunting fraternity, thereby resulting in a crisis of confidence by the general public.

If FWP wants to garner the support of non-hunting wildlife advocates, particularly when it comes to controversial issues such as wolf management, then it must do a better job of incorporating their concerns into the proposals and plans it develops. Simply going through the motions of a public participation process does not fulfill the agency's obligations. Interestingly, FWP states that it anticipates that the public will readily identify problems or weaknesses of the wolf program (DEIS, p. 75). However, it matters little if officials are unwilling or unable to recognize the inherent bias within the department's own management philosophy and practices, including its own political posturing, thus dismissing or discounting the legitimate concerns of differing viewpoints. The following is a perfect example of this shortcoming.

The DEIS acknowledges that (1) the relationship between carnivores and other species and the ecosystems in which they live could be the most poorly understood and controversial dimension of carnivore ecology (DEIS,p. 21); (2) there is remarkably limited evidence of the precise nature, degree, and mechanism by which wolves affect ecosystems (DEIS, p.21); (3) pup survival is highly variable and influenced by several factors, including disease, predation and nutrition (DEIS, p. 17); (4) pack territory boundaries and sizes may vary from year to year (DEIS, p. 18); (5) landowner acceptance of wolf presence, and the use of private lands is highly variable in space and time (DEIS, p.18) and (6) packs have been lost to illegal killing by humans, agency control actions where livestock depredation was chronic and for other unknown reasons. Considering the pervasive and ignorant anti-wolf sentiment in some segments of the Montana populace, it stands to reason that once Endangered Species Act (ESA) legal protections for wolves are lifted, intolerant human behavior will increase. Inexplicably, the DEIS fails to analyze comprehensively the implications of the aforementioned information.

In addition to these issues and concerns, a paper published in the April 2003 edition of the journal, Biological Conservation, written by Sanjay Pyare of Montana's Ecosystem Management Research Institute and Joel Berger of the Wildlife Conservation Society questions whether the potential for delisting both wolves and grizzly bears in the near future is ecologically defensible. While the biological recovery goal established by the USFWS is numerical, the ecological system upon which long-term wolf recovery depends is a long way from recovery. These well-respected scientists estimate that as much as 85% of the ecosystem has not recovered. What this may mean for wolves in the future is unknown.

In light of all this information, one would expect the FWP to adopt a precautionary principle of management to the wolves' advantage. Yet, it appears FWP is poised to adopt strategies that will assuage the concerns of some sport hunters, outfitters and livestock producers at the expense of the interests of wolves. In fact, FWP is so concerned about social values and tolerance that it has failed to adequately consider wolves themselves, independent of their instrumental value or lack thereof to humans. On page 22, the DEIS states: "A simplification about what drives the difference in attitudes towards wolves might be summed up in a few words: the perceived chance of personal benefit or loss resulting from the presence of wolves. Those who perceive they will benefit (either directly or vicariously) tend to favor wolf presence, and those who perceive a threat of personal loss oppose presence." This purely anthropocentric perspective entirely loses sight of the inherent value of wolves and the entire ecosystems of which they are a part.

Perhaps this failure accounts for the indefensible adoption of 10-15 breeding pairs in the preferred alternative as the arbitrary trigger for different management strategies. Such a strategy is clearly designed to address public opinion and has no biological or ecological basis.

Rather than reiterate all the concerns that we raised in our scoping comments submitted last year about this particular topic and related issues, I have appended a copy of that letter for your review. Most of those concerns have not been addressed in the DEIS. Of particular concern is the failure of the DEIS to comprehensively analyze how human activities impact wolves and wolf habitat and not simply the reverse.

For example, the DEIS should objectively analyze practices such as livestock grazing that directly and indirectly impact wolves and their habitat. Comments in the DEIS leave the mistaken impression that because farming and ranching preserve open spaces, these practices are therefore good for wildlife. On page 59, the DEBE states: "Farming and ranching maintains open spaces that is also habitat for a diversity of wildlife species, including wolves…. There are secondary benefits to a vigorous agricultural industry …." However, FWP is well aware that open space, in and of itself, is not necessarily good wildlife habitat.

The public is becoming increasingly aware of how its public lands have been degraded by livestock grazing and by raising of crops to feed livestock. And while ranching apologists insist that agriculture thwarts development, the facts do not bear this out. I would refer FWP to the extensively documented information contained in the recently published book, Welfare Ranching: The Subsidized Destruction of the West, edited by George Wuerthner and Mollie Matteson. Moreover, despite the fear mongering frequently used by the livestock industry, it is not an either/or proposition – i.e., either ranching or development. Communities have multiple ways of preserving wildlife habitat from land acquisition through purchase, swaps, negotiation of conservation easements, zoning restrictions, and the list goes on and on.

However, it is important for the public to know that fewer livestock means fewer fences impeding wildlife movements and causing injury and death to wildlife. Fewer livestock means less water will be redirected away from natural flows, thereby improving watershed health. Fewer livestock means fewer perceived conflicts with certain wildlife species, such as wolves. Specifically, the elimination of predator control activities and other "nuisance" animal control, conducted allegedly to benefit ranchers, will help tremendously to restore critical components to the environment, thereby conserving and/or allowing for the restoration of ecological processes – a benchmark goal for all public lands and wildlife agencies. Quite simply, fewer livestock means fewer private domestic animals competing with public wildlife for limited habitat along with fewer acres converted to grow livestock feed crops, and hence even more habitat for wildlife. The DEIS acknowledges that livestock losses appear related to the availability of wild prey (DEIS, p. 33), yet the DEIS offers no discussion about how the presence of livestock displaces wild prey, thereby affecting predator/prey interactions.

In addition, the DEIS should provide a comprehensive cost-benefit analysis of livestock grazing, not merely an economic analysis of how grazing contributes to the economies of local communities, so the public has the information it needs to determine whether so-called lethal wolf "control" actions are fiscally and ecologically warranted. The Fund has made it abundantly clear in previous comments that it is our contention that they are not.

Given that wolves are held in the public trust and they occur on public as well as private lands, such a cost-benefit analysis must examine both the economic and non-economic costs and benefits to general taxpayers (who underwrite all federal public lands including national forests, Bureau of Land Management lands and national refuges (where FWP would be managing wolves if such authority is transferred) by itemizing revenue generated by public lands grazing as well as costs of fence construction and maintenance, water diversion and development (construction of reservoirs, water catchments, pipelines, guzzlers or the placement of troughs or
storage tanks), predator and "nuisance" animal control, fire management, drought relief assistance, vegetative conversion projects to correct livestock grazing-induced problems, including prescribed burns, plantings and treatments such as noxious weed control, market price supports, livestock loss/depredation compensation programs and any and all other assistance to ranchers underwritten by tax dollars. In other words, if the DEIS outlines the economic hardships experienced by livestock ranchers caused by wolf predation, it must also describe the benefits these same ranchers receive at taxpayers expense.

While The Fund unalterably opposes the use of lethal predator control actions for livestock protection, any cost-benefit analysis must thoroughly examine both nonlethal and lethal control actions so the public can scrutinize their comparative long-term efficacy and cost-effectiveness. For example, the DEIS must provide information regarding wolf control activities on public and private lands including not only the numbers of wolves killed, but also whether non-target animals were killed, and if so how many and which species, the types of control actions, the names of the grazing permittee or other entities requesting control actions, the number of requests and the costs of control actions. The DEIS must comprehensively analyze both the biological and ecological impacts of nonlethal and lethal predator control and must also analyze a "no lethal predator control" alternative. The public is entitled to this information in order to evaluate control actions in general, and lethal control actions specifically, as means to mitigate financial loss by ranchers.

The cost-benefit analysis must also examine indirect costs of grazing such as how the aforementioned subsidies impact healthy ecosystem functioning, recreational opportunities, etc. For example, how have so-called "improvements" including fences, water developments, cattle guards, etc.beneficially and adversely impacted wildlife (including wolves and their prey), including any changes to behavior, distribution and movement patterns, as well as ecological functioning in general? For example, how does livestock grazing impact threatened, endangered and sensitive species? What costs associated with recovery programs for these species are ultimately attributable to livestock grazing practices? How much food and fiber are actually produced on the lands in question? The DEIS should disclose this information.

Cropping grasses and other vegetation during the growing season is most harmful, particularly if the plant is re-grazed. Wildlife seldom tend to re-graze the same plant because of their mobile behavior. Cows, being less mobile, often re-graze the same plant, causing damage to plants by forcing the plant to replace lost tissue, thereby causing root and seed production to suffer. Additionally, cows tend to be stocked in higher density than you find under natural conditions, further exacerbating the problem. If a drought occurs, such plants are at distinct disadvantage and may die. Most of the concentrated grazing by wild ungulates takes place in the winter when plants are dormant. The DEIS should provide a comprehensive analysis of the differences in grazing behavior between livestock and wild grazers (the primary prey of wolves). Again, such information is critical to an objective assessment of the alternatives in the DEIS.

We are further troubled by the two titles within the Montana statutes that describe the legal status and management framework for wolves. Senate Bill 163 amended several statutes in both titles (DEIS, pp.22), thereby requiring the automatic removal of gray wolves from the state endangered species list when they are removed from the federal list. This legislation also relieves a person from criminal liability for the "taking" of a wolf if the wolf is "attacking, killing, or 'threatening' to kill a person or livestock." (Emphasis added) (DEIS, p. 23) Such license opens the door for anti-wolf prejudice to rear its ugly head. Without strict liability provisions, law enforcement agents will have the unenviable and virtually impossible task of proving that the killing of a wolf was unnecessary.

To compound the problem, the Montana Department of Livestock will "cooperatively" address and "resolve" wolf-livestock conflicts. (DEIS,p.23) The public is well aware and fed up with such cozy cooperation in the management of another species in Montana – Yellowstone bison. If the bison debacle is any indication of how conflicts will be resolved, the public has every reason to be wary of such a partnership. Wildlife agencies should be solely responsible for managing wildlife.

Finally, the DEIS was developed prior to the reclassification of wolves in the Northwest Montana Recovery Area from "endangered" to "threatened." How such down listing will ultimately affect the long-term welfare and recovery of these wolves as well as ensure their role in functionally connecting the subpopulations of wolves in Montana, Idaho, Wyoming and Canada is yet to be seen. Unquestionably, liberalizing management options through down listing will have impacts – the extent of which must be thoroughly assessed before delisting is even considered. This is just one more reason that The Fund supports Alternative 1.

For the aforementioned reasons along with those appended to this comment letter, The Fund supports Alternative I, the "No Action" alternative. We remain convinced that delisting is premature. The long-term recovery and viability of the species depends on much more than just numbers of breeding pairs. Wildlife professionals must in good faith admit this fact and refrain from focusing primarily on numbers as an indicator of recovery and as a centerpiece in management plans. Thank you for the opportunity to comment. We intend to follow this issue closely and request to be notified of any and all developments.

L0242: I am writing to ask that the wolves in Montana NOT be harmed, trapped, snared or hunted. I ask that the wolves in Montana NOT be removed from the Endangered Species Act. I ask that the wolves in Montana be protected. This is crucial. All animals are God's creatures. All animals have both physical and emotional feelings. Animals can feel pain, stress and fear. Your help is greatly needed - now. Please help to save and protect God's creatures and the environment. Laws, rules and regulations should become stronger and be more strictly enforced to better help save and protect all animals and the environment everywhere. Soon. Funding of the state program should be assured before the plan is finalized. Provisions for when citizens are allowed to kill wolves should be clear and specific, permitted only when wolves pose an immediate threat to livestock or people. The minimum number of breeding pairs should be at least 20, as outlined in Alternative 3 of the draft plan, to assure long term survival. Wolves should be managed like other wildlife, such elk, bears and mountain lions, with NO artificial limits on wolf numbers or boundaries. If the wolves begin to over populate, there should be a sterilization used or created in an edible bait type form. Many wildlife become a "problem" due to weather, sprawl, polluters, loggers, development, etc...Sad. Thank you for taking the time to read this letter on this very important issue. I hope that you do receive this letter and in time. Thank you!

L0247: Forgive me for waiting until the last day to comment...spring gardening and wrapping up a school year consume me. I attended the meeting in Whitefish a few weeks back, and was impressed by the quality of the presenters and civility of the attendees. My comment card was such a mess, I had planned to write a nice long letter. Instead here is a quick list:
1) I am comfortable with the concept of the state taking over wolf management, AS LONG AS funding issues have been thoroughly addressed. This still needs federal dollars, because it is a federal priority. 2) I like alternative #3 the best. 3) Hunting could be considered in the future, but not trapping! 4) Hold landowners accountable for "best practice" ranching. 5) Keep management in the hands of the professionals, not the politicians. 6) Consider wolf habitat and prey base a "higher and better use" than human use. Wolves can't go to Safeway when they don't get their elk. Again, thank you for a job well done.

L0249: 1. We don't manage other wildlife species such as elk, lions or bears with artificial upper limits and habitat boundaries, and we shouldn't do so with wolves. Wolves should be able to live anywhere there is suitable habitat, prey base, and minimal conflicts with people. 2. Alternative 2 - would allow for a minimum population of only 10 breeding pair of wolves state-wide. It would also set 15 breeding pair as the point at which management shifts; nothing to do with sound science, and everything to do with political appeasement of anti-wolf groups. The original 1987 Recovery Plan called for 10 BP's in NW MT alone, with additional pairs around the MT portions of Yellowstone and Central Idaho. Under even this relatively weak standard, the minimum number of breeding pairs should be 20. 2. The Plan's commitment to no artificial upper limit must be cast in stone. 4. While we all understand the social and economic concerns must be considered, the fundamental underpinnings of Montana's plan must be based upon the use of "best available science" first and foremost. " FWP identifies population objectives that are based on landowner tolerance, habitat conditions, social factors, and biological considerations" is precisely backwards of the sound management required. 5. Once there are at least 15 breeding pair statewide, lethal removal of problem wolves will be more liberal on public land (our land) and may be the first choice on private land. This is far too quick on the trigger. The dividing line between conservative and flexible management should be 30 breeding pair, not 15. The first option should be to ensure that the rancher is practicing sound animal husbandry and not drawing wolves in with bone yards or improperly tended stock. Next should come on-site aversive conditioning (rubber bullets, cracker shells, guard dogs) Third should be transplanting; last resort should be lethal control. 6. When lethal control becomes necessary, it must in all cases be clearly focused on the offending wolves. The USFWS practice of taking out entire packs must not continue under state management; When there are less than 30 breeding pair, lethal control should virtually never occur. 7. No state plan should be considered complete and acceptable until such funding is available for at least the first 5 years; before FWS can move to delist wolves, they must be able to demonstrate the presence of "adequate regulatory mechanisms." This requires functional, legal, scientifically sound state plans. Without demonstrated funding, these state plans are none of the above. Only a comprehensive Ed and Info system will address this problem, and the $49,500 budgeted is only enough to address one third of the task, at best. We need more educators, not more scientific reports. 8. Plan says that all hunting and trapping is precluded if there are fewer than 15 bpairs. It should be raised to at least 30 breeding pairs. 9. The implication that sportsmen have to be bribed into doing the ethically right thing by being given a wolf season is insulting. 10. We don't need more token law enforcement here. For at least the first 5 years, fines should begin at $1000, restitution at $500, and jail time at 2 weeks. Lawbreakers must know that FWP is serious or wolf poaching will run rampant. 1. Such a series of blank check "licenses to kill" have no place in a state management plan. What wolf hater won't claim (successfully) that a wolf 500 yards away was "close" and "threatening" him, his dog, or his cattle? 12. What should we think of a state plan that allows one of Montana's most important carnivores to protect chickens? Not much. 13. While such programs appear to be valuable with some producers, why aren't rangers expected to carry insurance, like any other business? Why are taxpayers automatically expected to foot the bill? 14. Plan notes a recent scientific peer review of FWS definition of viable wolf population. Despite this, we see no "mortality thresholds" included in the plan which would be themselves trigger more conservative management. Similarly, we see no system of functional, scientifically sound linkage zones between recovery areas, despite the fact that these have now been GIS mapped for a number of species, including the wolf. Such linkages should be fundamental part of the plan. In their absence, few wolves have moved between the 3 recovery areas, despite the fact that such movement is considered vital to long-term viability.

L0251: The Humane Society of the US does not consider the gray wolf to be fully recovered in the northern Rockies region, much less the western DPS as a whole, primarily due to relatively small, isolated populations in this area and insufficient integration into the ecosystem. The attitudes of some citizens in this area continue to be very negative toward wolves. We are concerned that these negative attitudes will continue to pose a threat to the long-term survival of the gray wolf in this area. At minimum, these attitudes could result in a heavy reliance on lethal control to address wolf-livestock conflicts as well as pressure on the state wildlife agencies to allow hunting and trapping of wolves, once federal protections are removed. We suggest that when MFWP does assume responsibility for wolf management, it must do so with the understanding that it is maintaining this species in trust for the nation. Although the preferred alternative (or the additional wolf alternative) may provide some protective measures, we are concerned that these measures may not go far enough to ensure the long-term viability of the wolf. Long term survival of the population will require not simply a particular number of individuals in the population, but enough reproductive adults to account for loss of genetic variability due to chance processes over time, as well as variation potentially lost as a result of disease or weather-related events. While we are not satisfied with the USFWS definition of a pack is sufficient to ensure long term viability (and ecological foundation), the much loose definition of a pack suggested in the DEIS would be absolutely

unjustified and could jeopardize the long-term survival. Mistakenly classifying such a group as a breeding pair, with the assumption that it includes a breeding pair, could jeopardize the survival of the wolf population in Montana. This would be especially problematic if such a classification leads managers to allow for increased hunting and trapping or more liberal methods for dealing with wolf-livestock conflicts. We urge MFWP to adopt a definition of a wolf pack that is more rigorous and biologically relevant than the current USFWS definition. This definition should be retained even after the five year intensive monitoring period. We especially urge MFWP not to revert to an even looser, less biologically appropriate definition of social group. WE also do not see any justification for using a particular number of breeding pairs as a trigger for changes in management decisions. Human-wolf conflicts will not necessarily be reduced by reducing wolf population size via recreational harvest or through more liberal predator control. Attempts to reduce the wolf population (through hunting and trapping) to the extent necessary to actually produce a reduction in conflicts will likely put the wolf population once again at severe risk of extirpation. We suggest total MFWP and cooperating agencies rely on public education and assistance with non-lethal means of preventing or reducing conflicts with wolves. Conflicts between wolves and humans can be effectively addressed through non-lethal means (increase wolves' wariness through the use of frightening devices or by killing only the problem wolves. Increasing overall wolf mortality hen the state counts breeding pairs may have unintended consequences as well, such as destabilizing pack social structure and territory defense, or increasing the number of dispersing immature wolves. We are concerned that establishing a trigger in terms of the number of breeding pairs, through not intended by MFWP as a population "cap" may essentially function as such. It may inadvertently send a message to the public that only so many wolves can be tolerated, no matter how well the public prepares themselves to prevent any potential problems with wolves. At worse, the management trigger could make it difficult for the gray wolf to truly establish itself and for balance to be restored to the ecosystem. Data from other states indicate that an increase in a wildlife population does not necessarily correlate with an increase in complaints or conflicts associated with that species. We urge MFWP to abandon the use of a particular number of packs as a trigger for changes in management. Instead, MFWP should retain conservative management of wolves (i.e. only minimal human-caused mortality via conflict control activities allowed and no hunting/trapping) regardless of the number of breeding pairs or packs. Wolf recovery depends vitally upon the availability of suitable habitat -- for wolves, large well-distributed refuges are important to maintain sufficient genetic variability. The DIES acknowledges the importance of dispersal, but indicates that no corridors are planned specifically. Therefore the ability of wolves to disperse will absolutely depend upon tolerance by humans, especially if MFWP does not plan to cooperate with other agencies to restrict grazing leases in areas with a high potential for wolf-livestock conflict. We suggest that the importance of dispersal constitutes an important reason not to allow recreational hunting and trapping for wolves now or in the future. We are concerned that hunting/trapping for the wolf may be established or liberalized in the future for the sake of ensuring continued hunting opportunity for hunters interested in hunting elk and other ungulates. Allowing recreational killing wolf wolves or of predators for this purpose is simply unnecessary and unjustified. If necessary, the number of elk killed by human hunters may have to be reduced. We are also concerned that declines in elk hunter success in the absence of actual elk population declines may be used as justification to allow or increase the recreational killing of wolves. From an animal welfare perspective, designated the wolf as a game animal or furbearer sometime in the future would allow for hunting and trapping methods that many members of the public consider to be inhume for any animal, including the wolf. HSUS is opposed to the use by the public or by Wildlife Services of leg-hold traps, neck snares, let snares, or other trapping methods that have the potential to result in prolonged suffering and injury. HSUS recognizes the important of helping livestock producers to safeguard their livestock and to coexist safely with wild predators. However, the goal of reducing livestock depredations does not require the use of liberal lethal wolf control, even when wolf population size is perceived to be large in the area. The use of livestock guarding animals and other non lethal measures should be combined with livestock husbandry improvements in fencing, prompt removal of carcasses, and providing greater protection and supervision of the vulnerable old and very young cattle and sheep. When depredations occur in spite of responsible husbandry and other nonlethal preventative techniques, aversive conditioning and the use of frightening devices can be employed to alter the behavior or depredating wolves. However private citizens engaging in these techniques for the protection of livestock or other property should be properly trained so that they are used effectively and do not cause unnecessary injury or suffering. Widespread nontargeted lethal control or unrestricted hunting/trapping is at best not necessary for the protection of livestock. We are concerned that the DEIS provides only limited information on the nature of the assistance that MFWP or WS will provide producers regarding livestock husbandry improvements and nonlethal predator control methods. HSUS urges MFWP to give greater consideration in the final EIS to nonlethal control methods and use lethal only when all feasible nonlethal control and prevention methods have been exhausted, regardless of the number of breeding pairs. If lethal control is unavoidable, wildlife management professionals are best suited to this task and are more likely than private citizens to target the appropriate individual and to effectively minimize pain and suffering. WE ask MFWP to provide more detail in the final EIS on types of assistance -- such as workshops, onsite demos, information on how to purchase and train livestock guarding animals. We also urge MFWP to specify that any lethal control, conducted for the sake of protecting livestock is only conducted when a depredation has been verified and only after all feasible nonlethal techniques have been attempted. HSUS is strongly opposed to the use of chemical toxicants (including sodium cyanide, sodium flouroacetate) restraining traps, kill traps, denning, aerial gunning and other methods that may result in prolonged suffering. We are particular opposed to "preventative" lethal wolf control in which wolves would be killed in the absence of verified wolf depredations. It is unreasonable for livestock producers to expect all risk of predation to be removed=moved. This goal could only be reached by killing 4every wild predator. HSUS agrees that the affected livestock producer should be eligible for compensation at fair market value. We agree that this is an important way to maintain residents tolerance for wolves, at least until more efficient means of nonlethal reduction to risk is more widely used. We urge MFWP to at least establish a temporary wolf depredation compensation fund using state money. Such a fund could expire on a previously determined date under the assumption that other sources of funding will be found in the meantime. This would reassure the public that the state is prepared to take on the responsibility of managing wolves after delisting. We urge MFWP to provide more concrete details on the potential funding for an incentive program and/or proactive program. We appreciate the clarification that a wolf must be "attacking or killing" a domestic dog before a person could legally kill the wolf. However, we are concerned that this distinction between a threat and an actual attack may be difficult to enforce. While we certainly do not want to see dogs killed by wolves or other wildlife, and would understand the desire to attempt to save a dog, owners must be encouraged to take some personal responsibility for the safety of their pets. We understand that the long-term persistence depends on carefully balancing the complex biological social economic, political aspects of wolf manage. But we are concerned that a small number of especially vocal members of special interest groups are dominating the "human dimensions" aspects of wolf management strategies in this state. We agree that legitimate concerns about wolf depredation on livestock and the associated economic losses must be addressed. However, an outright opposition to predators by some individuals in Montana has been driven primarily by unwarranted fears and exaggerated claims about the effects of wolves on livestock, human safety, and other wildlife populations. These unfounded claims should not be used to justify recreational hunting or trapping, or liberal lethal wolf control for the sake of protected livestock without first attempting all feasible nonlethal methods.

L0252: Montana Audubon supports a modified alternative 2. The modification we would request in the preferred alternative is to increase the minimum number of breeding pairs of wolves to 20 before liberal management tools are applied. Montana Audubon supports the use of successfully breeding pairs as the population measuring standard for wolves in Montana, versus the use of packs that may or may not be breeding. We also endorse using a minimum breeding pair count, with no maximum count established. We support allowing wolves to be distributed by the interaction of the

species ecological requirements and human tolerance not through artificial delineations. Zoning the state for wolf distribution would be a mistake. We support a minimum level of 20 breeding pairs of wolves before liberal management tools would be implemented. It makes sense to err on the side of conservation of wolves with a higher minimum recovery level established. Montana contains much of the core habitat for the three identified wolf populations centered in Montana, Idaho and Wyoming. Given this fact, maintaining a higher number of breeding pairs in core habitat makes sense. Montana is a big state. Maintaining a minimum of 20 breeding pairs is such a large geographic area is consistent with these goals. Montana, Idaho and Wyoming will not be tied to each other with recovery numbers. A larger number of breeding pairs in Montana would add a safety margin for wolf conservation in the tri-state region. We applaud FWP's commitment to secure funding for wolf management, above and beyond hunting license dollars, including taping resources outside the state that will support management of this nationally important wildlife specs. At a minimum, federal funding sources that could offset cost for wolf management, should be pursued; we are willing to assist FWP in advocating for federal funding. It is important for FWP to actively work with federal and school trust land managers, and private landowners to ensure that practices applied on the ground do not diminish habitat or long-term conservation of wolves. Advocate for special protection for wolf den sites, keeping unroaded areas of the state unroaded, and other similar land management activities. Montana Audubon supports FWP in establishing a compensation program that reimburses livestock producers for confirmed and probable losses due to wolves. Critical to building tolerance amongst ranchers for wolves. We also support program work that emphasizes prevention of conflicts. Providing incentives for ranchers to avoid conflicts will be an important part of this program. Support the development by FWP of an ongoing education outreach program. Scientifically and factually based. FWP is already producing information so that hunters can distinguish between coyotes. Supports the approach to human safety outlined in the preferred alternative.

L0253: In accordance with our belief that uncontrolled wolf populations will reduce big game hunting opportunities and our support for hunting as a multiple use on public lands, we vigorously oppose all of the alternatives, except alternative 4. We feel that there are already too many wolves in Montana. They must be controlled before their numbers get out of hand. It appears that wolf management may become very expensive. MFMU feels that we need to reduce the numbers of wolves in Montana until they reach a level that we can afford to control. Hunting will never work as a means to control wolves. Alternative 5 is not a contingency; it is a capitulation to federal power and a waste of money. MFMU believes alternative 4 would be more palatable to some, even though a declaration of the wolf as a predator or furbearer may actually be more useful to Montana. The primary reason for choosing alternative 2 over 4 is a belief that Montana must comply with federal dictates of USFWS because of the ESA. In order to fulfill its obligation to citizens of Montana and manage wolves for the benefit of Montana, it may be necessary for the state to vigorously defend its wildlife management right both in court and in the media. It may be an expensive and lengthy undertaking. Nerveless it must be done because the only other option is a complete surrender of the right to manage wildlife to federal bureaucrats. If wolf populations are not aggressively controlled, big game populations will continue to crash and the purchase of hunting license will follow that trend. Before long MTFWP will depend almost entirely on Montana taxpayers for their funding. If wolf populations are not controlled in Montana, and soon, MTFWP will become irrelevant and unnecessary. MFMU completely supports the comments of Montana Shooting Sports Assn. regarding Montana wolf management.

L0254: Animal Protection institute asserts that delisting the gray wolf under the federal Endangered Species Act is premature because wolf populations remain relatively small and isolated, especially when compared to their historic abundance and distribution. API is concerned that state management plans, such as Montana's, will allow sport hunting and trapping of wolves outside of national parks and wilderness lands once federal protection is removed. In addition, we believe the preferred alternative's adaptive management strategy that places emphasis on lethal control to mitigate livestock and ungulate depredation is misguided, unnecessary, and inhumane. The preferred alternative essentially sets an artificial cap on wolf populations. When 15 pairs are achieved, more aggressive management tools may be used under the alternative. We contend the preferred alternative fails to adequately acknowledge the ecological, economic, cultural, and inherent values of wolves. An effective management plan must recognize the critical role wolves play in natural systems, our society's spiritual, psychological, emotional, and historical connections to the species, the remarkable financial benefits of wolf reintroduction has brought to the Northern Rockies, and the rights of wolves to peacefully coexist with people. Finally, we assert that the DEIS fails to meet the basic requirements set forth under the Montana Environmental Policy Act (MEPA) and the MEPA Model Administrative Rules.

Delisting at this time would pull the plug on a species that still requires intensive care. At least two listing factors clearly demonstrate that the wolf remains endangered or threatened throughout a "significant portion of its range". The first is "the present or threatened destruction, modification, or curtailment of its habitat or range". Wolf recovery must incorporate the interrelated goals of conserving genetic resources and maintaining natural systems and biodiversity over a representative portion of the wolf's historic range. A successful wolf restoration plan must:

- Provide continued rigorous protection of wolves, with the recovery across their historic range as the primary goal. Base recovery goals on viable self-sustaining wolf populations without an artificial cap.
- Prohibit recreational or commercial trapping of wolves.
- Prohibit private citizens from killing a wolf unless it poses an immediate threat to human life.
- Place priority on preventing livestock-wolf conflicts. Rather than allowing lethal control of wolves, emphasis should be placed on improved animal husbandry practices that deter wolf conflicts.
- Eliminate and/or reduce grazing of livestock in high-conflict areas that are essential to wolf recovery.
- Prohibit lethal control of wolves ostensibly to conserve or boost elk, deer, and other wildlife populations for hunters.
- Identify funding sources to sustain Defenders of Wildlife's compensation program for livestock losses. It should be noted, however that API believes ranchers should contribute to such a fund. Ranchers should implement non-lethal deterrents to prevent livestock-wolf interactions.
- Improve and facilitate public outreach efforts.
- Encourage wolf restoration on non-federal lands by working with FWS and the conservation and animal protection communities to develop incentives for private landowners.
- Protect critical areas of wolf habitat during key seasons.
- Review, identify, and recommend protections for linkage zones and critical areas of wolf habitat.
- Include a provision for a state wolf management advisory council to continue to identify, discuss and discern management goals, conflict resolution and public education opportunities.
- Identify stronger penalties for illegal killing of wolves.
- Assure funding for state wolf management before the plan is finalized. Funding should not depend upon revenues generated from hunting licenses.

We urge FWP to adopt alternative 1 with our proposed amendments detailed below. Wolves would remain on the endangered species list and enjoy the full protections of the ESA until full recovery of the species in its historic range has been documented and ensured over long term.

FWS would not carry out aggressive management, including lethal control and relocation of wolves, to ostensibly protect or artificially boost prey populations.
Livestock interests and state livestock and wildlife management officials would be required to continue complying with the provisions of the ESA and use cautionary principles to ensure their activities do not undermine wolf recovery efforts.

Wolf managers acknowledge the importance o wolf habitat, including private lands adjacent to federal lands. We contend the following amendments must be adopted to enhance wolf restoration. 1. Both the federal and state governments should encourage private landowners to restore and enhance potential wolf habitat through incentive programs.
2. FWP should improve its public outreach and education efforts to assist landowners with taking steps to avoid conflicts with wolves.

Alternative 2 is fundamentally flawed for the following reasons:
The preferred alternative would allow continued persecution of wolves by reclassifying wolves as "species in need of management", "Big game," or "furbearer". The DEIS fails to make clear what protections would be afforded to wolves under state classification as a "species in need of management" and how these protections differ from those provided under the ESA.

It seems a forgone conclusion that once the veil of federal ESA protection is lifted, Montana will move swiftly toward establishing regulated hunting and trapping of wolves and grand broader latitude to state livestock officials and livestock interest to manage wolves. It makes little sense to abruptly shift management from full protection to regulated "harvest" for a species that is still imperiled. In addition, we are leery of handing over wolf management to Montana, Wyoming, and Idaho because we believe the states' desire to permit "harvest" of wolves to generate revenue for their respective fish and game departments is driving the decision-making process far more than a commitment to protecting wolves. Dead wolves should not be seen as the cash cow for struggling financially strapped fish and game departments. The preferred alternative suggests that Montana will permit the killing of wolves to conserve or boost populations of "game animals" such as deer, moose, and elk. The preferred alternative's adaptive management plan promotes lethal wolf control and recreational killing as scientifically defensible management methods, while granting broad discretion to federal and state agencies and private citizens to manage livestock-wolf conflicts and ungulate-wolf interactions.

API strongly opposes an adaptive management plan that allows "liberal" use of lethal control of wolves as the species' population increase in the state. While we recognize the need for ranchers to safeguard their livestock form predators and the need to protect human safety, the onus should be placed on humans to reduce the possibility of conflicts. The preferred alternative fails to protect habitat corridors, which are vital to allow movement between wolf subpopulations.

The DEIS is required to have a section that summarizes the proposed action including its purpose and benefit. In Chapter 1: Purpose and Need for Action." the DEIS does not describe the proposed action, and does not describe the purpose of the proposed action and does not describe the benefits of the proposed action. The DEIS only states that without action the USFWS will not delist the gray wolf. Clearly this is not an appropriate explanation of the need for agency action. There is no statement as to why it is problematic for the USFWS to manage wolves in Montana.

The only benefit that the DEIS lists is that managing gray wolves according to state guidelines "will allow the program to be more flexible and adaptable". However, this statement does not specify how Montana's management of gray wolf program would be more flexible and adaptable than the USFWS's management , nor does it go into any detail about why this proposed action is a benefit. The analysis on this topic is merely a paragraph long and is wholly inadequate. There is no description of the proposed action within the purpose and need section. There is no discussion that that a substantive change in management would occur under the proposed action. This section of the DEIS implies that the proposed action would merely be a change in management authority. This is a disingenuous portrayal of the proposed action. The proposed action is described it the Preferred alternative section. However, MEPA's implementing rules, MAR require that the proposed action be described in a section outside of the Preferred Alternative, as a means of providing a summary for the reader. Thus, FWP fails to meet the substantive requirements outlined under MEPA.

MAR requires that the DEIS describe how agencies will share responsibility, or not share responsibility for the proposed action. The DEIS does not fulfill this requirement. The DEIS speaks only of the situation "at present" but does not state how jurisdictional rules will be allocated under the proposed action.

Although it is unclear whether Indian tribes would meet the definition of "state, local or federal agencies" the DEIS must address how Indian tribes' jurisdiction will be affected by the proposed action. Under USFWS wolf management. Indian tribes have certain jurisdictional rights. The DEIS does not say whether or not Indian tribes will retain this jurisdiction.
The DEIS does not adequately examine the primary, secondary and cumulative economic impacts from the proposed action as required by MAR an MEPA. There is no analysis of the economic impact of the possible loss of revenues form non-hunting outfitters and wildlife viewing. The DEIS also fails to list revenues derived from wildlife watchers. There is a huge disparity between the depth of analysis for hunting revenues and wildlife watching revenues. There is no accounting of the amount of revenue derived form hunting versus wildlife watching, therefore, no conclusions can be drawn regarding the overall financial benefit or detriment to the state.

Furthermore, the extensive information on hunting revenues is irrelevant because there is no analysis on how hunting revenues would be impacted by the proposed action. Every alternative that the DEIS presents keeps the number of wolves lower than under the current USFWS wolf management. This will result in biological and environmental impacts on the ecosystem that have not been analyzed as required by MAR. DEIS fails to state the social, cultural and religious impact of the proposed action. The DEIS alternatives, 2,3 and 5 have such similar characteristics that they do not truly provide alternative plans. The DEIS does not give equal analysis to the alternatives. The DEIS fails to provide the mandatory explanation of the tradeoffs among the alternatives. Although the DEIS contains a section entitled "Preferred Alternative" it does not state the reasons for the preference. The DEIS is required to list the reasons for making this alternative the Preferred Alternative. The DEIS fails to include the mandatory list of source materials used in the preparation of the DEIS. Therefore based on the FWP noncompliance with MEPA and MAR as outlined above, it is clear that FWP has failed to meet the basic requirements set forth under these Acts. Moreover, the FWP has not made a good-faith effort in preparing this document and, as such should be viewed as not legally sound. FWS should reclassify all gray wolves as "endangered". FWS should designate critical habitat for wolves. Montana's plan would perpetuate the historic and systematic persecution of wolves.

L0258: 1)I am concerned about the number of wolves that are already here. I think the state of Montana should assume control of the population of wolves. There are dozens of them near our homes at this time. 2)I think wolves should be managed the same regardless of who owns land inhabited by wolves.

L0261: I strongly believe that once wolves are taken off the federal endangered species list within the next two years that Montana should afford these magnificent animals the highest protection possible under state law. Wolves should have no artificial limits or territory and they need to maintain at least 20 breeding pairs.

L0264: We feel the reintroduction of the wolf severely threatens present and future hunting opportunities and would like to see wolves aggressively managed in order to minimize that threat. Concerned about the negative economic impacts which may occur throughout the state should hunting

opportunities be diminished by wolf predation. We should support an alternative which will place management firmly in the hands of Montana FWP. We feel 15 breeding pairs is too many. Our membership is not interested in hunting wolves. Their primary concern is that ungulate populations remain as stable as possible. We support alternative #4 and support the provision that wolf distribution be restricted to areas where the least impact to livestock would occur.

L0265: We support a wolf management plan that protects all wolves on public land. Ranchers need to be able to protect their livestock on their own private lands. Public wild lands exist to promote public wildlife, not domestic livestock. Although ranchers can certainly be compensated for livestock losses encountered within public lands, all wolves staying within national forest, state lands and other public lands should remain alive, wild, free and unmolested. Wolves belong on public wild lands. This plan should include specific provisions promoting retention of wolves into the Whitetail-Haystack-O'Neal road less area in Deerlodge National Forest, the Elkhorn Mountain Wildlife Management Unit, the Electric Peak/Thunderbolt Mountain Road less area in the Helena National Forest and other public wild lands throughout the state. No formal scientific analysis of viability based on genetics and demography has ever been done. It is completely inappropriate to de-list wolves and turn management authority over to states before this vital information is obtained. Wolves exist in less than 2% of their native territories. Two percent is not significant. No further wolves should be killed until these essential studies have been conducted. Long-term viability for genetics concerns alone requires and effective wolf breeding population size of at least 500. Scientists agree that a significant wolf population is essential to retain genetic viability in the face of high mortality due to livestock interactions, illegal poaching and the lack of adequate migration corridors. Address the need for secured and protected migration corridors. None of the alternatives provide for a realistic population of wolves. We currently support the no action alternative, until compliance with the Federal endangered Species Act.

L-269: It is good to know that the wolves are reproducing enough to warrant delisting. Alternative 3 (more wolves) is the best, followed by Alternative 2. Alternative 4 (less wolves) is unsatisfactory because the minimum of ten breeding pairs could be as low as fifty or sixty wolves over a very large area and relisting of the wolf could easily occur. Support your funding efforts and the North Fork Preservation Association wishes you well in getting funding so that alternative five never happens.

L0271: We feel that it is a must to get the wolf delisted for the sake of our farmers, ranchers, and hunters and in general, the safety of all of our citizens. We prefer Alternative #2 with a couple of exceptions and they are to establish a zone for the wolf population and give landowners more flexibility in the Central and Eastern Zones of the State of Montana. Wolves should not be allowed to become established in Central and Eastern Montana. We believe that the administration, delisting language from Alternative #4 should be added to the Central and Eastern Zone in Alternative #2.

L0274: We do not want wolves established in Wheatland County. We feel that we need to protect Wheatland County's #1 resource: agriculture. Wheatland County's resolution #64 expresses our desire to prohibit the presence, introduction, or reintroduction of wolves within the boundaries of Wheatland County. It appears that Alternative #2 is best suited for Wheatland County. We believe that a zone needs to be established for the wolf population, and that landowners in the Central and Eastern Zones need to be given more flexibility.

L0282: Last year and this year you incorrectly stated that outfitters are under the jurisdiction of the Dept. of Commerce. See pg. 2 of present report. Wolf history continues to be very bad on pg. 3. Pg. 6 wolves have never been extinct in Montana. Pg 13 History of wolves in Montana is highly inaccurate. Wolves were present in Glacier National Park many years prior to 1979 and 1986. See Singer 1975. Pg. 14 the number of wolf packs for the Great Bear, Rocky Mountain Front, Bob Marshall and Scapegoat Wilderness areas seems to be extremely low at only two or three. Most of the wolf history from USFWS dates from 1979 with only one from 1975. You should have more in the 1936 -1979 period, which you have basically ignored. Pg. 18 wolves were present before the 1980's in Glacier Park and the Rocky Mountain Front and South West Montana. On pg. 20 you do not mention the possibility of Alaska wolf genetics being present in the YNP area from the first plant of wolves. You do not mention the number of big game animals that will be taken in a year by a certain number of wolves. This is a very important issue in Montana and you have ignored it. Wolf-human encounters are inaccurately reported on pg. 56. Again you only briefly mention rabid wolves and they will probably occur in Montana again in the not too distant future. I cannot stress too strongly that many of the wolf attacks reported could have been human kills had not a suitable weapon been available to kill the wolf or wolves. On pg. 73 you say a regulated harvest of wolves will do many things. Have you looked at Alaska and Canada to see how hard it is to kill the necessary number of wolves to regulate a population? The 72-hr reporting requirement should be kept for wolves and perhaps extended for all species. You wonder why people quit buying hunting licenses. The above is just one more nail in the license coffin. I can remember when we had some common sense and freedom in this state. On pg. 87 you need to re-think the management of predatory species on winter big game ranges. Having invested much effort, money and time in our state wildlife management areas for ungulates we should not let them be ripped apart by too much predation or harassment. Also nowhere in this report have I seen the value of meat produced by wild animals for people in Montana. Having survived for several decades on wild game I see the value of the meat. For many Montana people hunting is more than recreation. Refer to page 124 on State Game Ranges. On page 123 the use of the term breeding pair appears to bias the number of wolves and wolf packs present. You should just try to count wolf packs and even then you will not be counting all the wolves or packs. Also lone wolves and pairs apparently aren't counted. On the top of page 125 common sense has again deserted you. If wolves have to be reduced to lessen ungulate mortality it does not necessarily follow that hunters should suffer also. It appears you want to create a wolf management bureaucracy. We know that we have plenty of bureaucrats in Montana today. They are even more numerous than wolves. Hire the best, experienced ungulate (deer and elk at least) and wolf person you can find to supervise the field program. You already have four or five bear specialist, train them to work with wolves in winter. They can work with wolves at other seasons also. Skip hiring the extra wardens.

L0293: My conscience does not allow me to agree with the reintroduction of wolves in Montana or any of the recovery area. I realize this is not the opinion of everyone therefore, I will try to be somewhat tolerant for the wolf even though I strongly feel they are worthless and will harm future generations of big game animal and never be accepted as a beneficial predator to big game animals by responsible hunters. I don't totally agree with any of the wolf management options but alternative #4 "minimum wolf' is the closest that I could accept at this time. Needs to be modified: Big game animals and their population goals need to have preference over wolf needs. If big game animal populations drop below management goals in a given area where wolves are present, the pack shall either be moved to another area or exterminated. We cannot afford to have wolves hamper the recovery of big game animals. The maximum number of wolves within Montana should be capped at 10 packs with no more than 10 wolves per pack. 15 wolf packs in Montana are too many. Wolf numbers shall include wolves on both private and public land. Wolves are not zoned out of areas east of the continental divide. No sportsman's money can be used for wolf enhancement/recovery. Environmentalist and federal government should be made to foot the bill for wolf management and livestock compensation. Maybe after another five years or more of in-depth study we could see where more wolves could fit in our state, but for now keep population numbers at 10. I strongly feel that hunters should never have to accept reduced hunting

opportunities due to wolf impact. If the big game species numbers start to decline where wolves are present then wolves need have their packs reduced or eliminated. I am strongly against any of my sportsman money being used for the benefit of wolf recovery or compensation for livestock loss. The environmentalist wanted the wolves back in Montana, figure out a way for them to pay for managing wolves. I strongly feel we need to take more time to study the wolves impact and then modify our plan accordingly. But for the present we need to keep the population at a minimum number that will allow them to be removed from the federal listing so we can manage them ourselves.

L0299: We fear that no wolf control guidelines are adopted, we could loose significant number of cattle to predation. FWP must be able to control the number of wolves. Livestock owners or private citizens whose person or property are threatened must be able to kill wolves without threat of prosecution. Animal control officers must be able to quickly kill offending wolves before they kill again. The number of breeding wolves must be kept to a minimum. Cost to manage wolves should come form the federal government and pro-wolf groups, not the state of Montana.

L0300: I am in full agreement of the Fergus County resolution. Threats to our culture and economy have a very menacing potential. I hear testimony from individuals how extremely disruptive a wolf pack can be to a small herd of livestock and game animals. One example is the decimating numbers of the new calf population of the Yellowstone Elk herd of which I am sure you have extensive and reliable knowledge. A wolf pack is not going to recognize a boundary the some well intentioned or maybe not so well intentioned group or individual that has drawn a line on a map. There is not a need to introduce more in the rest of the state. If wolves are introduced in eastern counties it will have a definite impact of land closures, operators getting out of block management contracts, etc. Just general deterioration of public relations with game agencies.

L0315: I strongly support alt. #1, Strongly oppose alts 4 and 5, moderately support alt 3 and reluctantly oppose the preferred alt 2. I strenuously object to turning over de facto control of the wolf population to the likes of state legislators. Those in Idaho and Wyoming are on record I favor of slaughter on sight. Those in Montana differ only in that they have better control over their tongues than their colleagues in Boise and Cheyenne. Therefore I prefer alternative 1, leaving the management of wolves unchanged on the theory that a change to pro-active/somewhat more pro-wolf management could occur at the federal level in 2005 or 2009 before attitudes in MT, ID and WY statehouses turn for the better. Even the preferred alternative allows for killing wolves in self-defense. My fear is that the self-defense story will be used even when a wolf is gunned down at 300 yards. Alternative 2,3 and 4, its hard to argue for or against 10,15,20 or 100? Etc. etc.. Breeding pairs. I would suggest forgetting the numbers until either 1)the Defenders of Wildlife become so overwhelmed with requests for reimbursement that other management measures (i.e.. Killing some excess wolves) need to be considered or that 2) there is verified documentation that wolves are killing deer, elk, moose (or even other species like mountain lions or bears) in such numbers that the herds/populations are showing declines directly attributable to the wolves (and not to weather, hunting pressure, diminished habitat, etc) If significant predation is NOT evident, then perhaps the wolf population should be allowed to increase to 20 breeding pairs (alt 3) or more. Having noted my opposition to any state takeover of wolf management, I would also be opposed to any partial management (alt 5) while the feds are in the litigation which is bound to occur.

L0319: The department agrees that the long-term future of wolves in Montana depends upon carefully balancing the biological, social, economic and political complexities of wolf management. Further, it is also DNRC's view that it is appropriate for FWP to develop a comprehensive management program. The FWP preferred alternative appears unlikely to create appreciable conflicts with our legal mandate to produce revenue for school trust beneficiaries and we support selection of this alternative. The department also acknowledges and concurs that Alternative 5 is reasonable consideration given de-listing uncertainty. The preferred alternative is highly compatible with DNRC's forest management direction to manage for healthy and biological diverse forests and recently adopted Forest Management Rules. In particular, the DNRC supports the FWP's position that since specific habitat corridors, travel restrictions, or area closures were not necessary to restore wolf populations they should not be necessary to conserve and manage a recovered population. The alternative also provides important considerations useful for DNRC's ongoing development efforts for an HCP to address forest management activities on forested school trust lands. With ongoing state budgetary considerations we acknowledge the need to seek considerable funding for long-term monitoring and management need.

L0321: We believe the no action alternative is the best option for wolf recovery for the following reasons. No population viability analysis has ever been prepared for wolves in the Northern Rockies. It is inappropriate to de-list wolves and turn management authority over to the states prior to having this vital information. No analysis of sustainable mortality has been calculated that would be in concert with a population viability analysis. No analysis of migration corridors needed to maintain adequate levels of genetic interchange throughout the region has been prepared. Wolf recovery in the Northern Rockies has been politically driven, without adequate consideration of the best available science, as required by the Endangered Species Act.

L0322: Updated Council version of the wolf plan seems to be the most logical approach. Wolves should be delisted now, as a healthy population exists. Hunting of wolves should be allowed, with changing annual quotas dependent on current populations of wolves, deer, elk, and moose. Manage wolves as mountain lions are managed. Fees collected by the state of Montana for wolf permits/licenses could be used to help pay the cost of annual data collection on wolf, deer, elk, and moose populations. Other costs related to wolf management should be paid by U.S. Fish and Wildlife Service, as it was a federal program, not one requested by the voters of Montana. Livestock owners should be able to protect their livestock before there are losses and should be compensated for losses. There should be authorities (federal and state wildlife people) available in every county that has wolves, so they can respond immediately when there is conflict with wolves.

L0323: Granite County Land Use Planning Council functions as an advisory group to the Granite County Commissioners on issues related to the management of natural resources. The council feels quite strongly that existing populations meet the requirements for recovery, and that wolves should be removed form any Endangered Species Act protections. It is absolutely critical that State of Montana assume the leadership role in management of Gray wolves in Montana. It is imperative that any distinction between public and private lands be eliminated. It has been estimated that nearly 80% of wild ungulates in Montana winter on private lands in addition to domestic livestock. It is important to provide management options for landowners to address issues with wolves that move from preying on wild ungulates to domestic livestock. Additionally, over 90% of Granite County livestock owners utilize grazing permits on public lands. They must have the maximum number of options available for addressing livestock/wolf conflicts as well. During this phase of transition in status of the wolf, it is of utmost importance that management decisions are based in science and reflect biologically correct assessments, and not the whims of those pursuing political agendas.

L0325: Wolves should be given the greatest protection possible and populations allowed to grow until they reach a natural carrying capacity for the state and region. Wolves should not be hunted due to the disruption this will cause to each pack's social structure. MTFWP states that wolves should be managed just like mountain lions and black bears. However, this is not what you are proposing. It appears that you are not going to let wolves grow in

population size until they reach an equilibrium with their environment, which is what lions and bears are being allowed to do throughout the state. Instead you are proposing to keep a minimum of 15 breeding pairs. This is inappropriate. What you mean by managing wolves like bears and lions is that they can be shot and killed. In order for wolves to be managed like other big game in the state they must be allowed to grow to a natural carrying capacity and then strictly regulated to ensure continued population growth. Whether or not wolves affect big game populations they should be encouraged to expand their range into all habitats of Montana. Wolves and other predators are important and vital components to functioning ecosystems. Hunters fear that wolves will cause big game numbers to decline, but this is exactly what many people around the state and MTFWP are managing for, so wolves should be greatly welcomed to expand and potentially reduce big game numbers. There is great opposition to wolves in this state form many citizens, but there is also great acceptance and understanding for wolves by many people in Montana and around the USA. But just because the power is shifted to the states does not mean that you have to bow to the irrational wishes of many vocal opponents of wolves. MTFWP should manage wolves so that they can flourish in number and once again hold their title as a top predator throughout the state where they number into the thousands and contribute migrating individuals across our borders.

L0326: Alternative 2 has 15 breeding pairs, a number that could be accomplished with already identified populations located where they already are. Agriculture is Phillips County's main industry and we are committed to support our citizens whose livelihood is dependent upon this industry. We do not want wolves reestablished in Phillips County. We join our neighboring counties who also oppose reintroduction of wolves. We have passed a resolution declaring the wolf an unacceptable species - a threat to public health, safety, and livelihood. Many our out-of-county and out-of -state visitors come here specifically to hunt which brings additional revenue to our businesses. If the wolf is reintroduced here, the amount of private land open to hunting will decrease. Landowners do not want the wolf. We realize it is critical that we get the wolf de-listed and feel you can do this under alternative 2 with the following amendments. A specific zone established for wolf population. Landowners I the central and eastern zones need more flexibility. If/when the wolf population moves to an area outside the established zone, specific remedies need to be spelled out, Wolves will be trapped and relocated to an acceptable site or destroyed.

L0016: 2) I like Wyoming's proposal. Any wolf outside of National parks or wilderness will be treated as a predator.

L0053: 1) Alternative #3. 2) More education options. No wolf harvest.

L0059: 1) Alternative 2 uses 15 breeding pairs for management over the 10 of feds and gives FWP a better way to manage. State of Montana and others hopefully sportsmen and ranchers will develop compensation program. 2) Make it known that feds should pay their share of the future program. Not just Montana. State of Montana and others - specify others as sportsmen and livestock owners and private property owners.

L0074: 1) None 2) List the wolf as an unmanageable predator.

E6: 1. The minimum wolf alternative is the best of the choices next to eliminating them entirely. 2. Keep a VERY minimal amount (10 or even less) of breeding pairs inside Yellowstone Park and make the wolves unrestricted legal game at ANY time they are found where legal hunting and or shooting is allowed.

E10: 1. I think the proposed 15 breeding pairs is adequate for representation of the species. I support the preferred alternative \2. Have the 15 breeding pair restrained to either Yellowstone or Glacier Parks. If they leave the Parks they could be controlled like any undesirable predator. If wolves left the Park and there was not 15 breeding pair capture the escapes and take them back. If there was more then 15 breeding pair in the parks they could be trapped and destroyed or shot on sight. If you want a complete ecosystem in the parks fine but to turn them loose on the general public is neither right sensible or desired.

E12: 1. Recovery goals should be based on viable self-sustaining populations without an artificial cap. The draft plan is too lenient in allowing the lethal take of wolves simply for threatening to kill livestock or pets-especially on PUBLIC LANDS. The final plan should allow for only non-lethal deterrents in the case of wolves threatening livestock. Lethal control should only be used as a last resort when other methods have been exhausted and failed. Reasonable incentives for citizens working to reduce or avoid conflicts should be considered and adopted. It is important that livestock operators and owners also demonstrate responsible animal husbandry practices including the removal of dead livestock carcasses and avoiding active wolf dens. Include a provision for a state wolf management advisory council to continue to identify discuss and discern management goals conflict resolutions and public EDUCATION opportunities. Begin wolf management training for wolf biologists prior to delisting. Training should prepare biologists for management including radio collaring and monitoring wolves. Stronger penalties for ILLEGAL take of wolves. Identify reasonable and appropriate funding strategies for state management by working with stakeholders. 2. Alternative 1 would be the closest and most appropriate.
E14: 1. I would like to see 15 breeding pairs or less and I would like to see them managed like black bears and mountain lions. 2. My biggest concern is my hound dogs. I know of several hound dogs that have been killed by wolfs in Montana and Idaho. Your own statistics show your third largest group of domestic kills are dogs. 108 cattle 220 sheep and 21 dogs. You are saying that it is ok for a rancher to protect his 400.00 calf and his guard dog but I can not protect my hound dogs. Which can be sold for thousands and are irreplaceable to me. I think anyone should be able to protect his dog know matter what kind.

E19: 1. I believe wolves can a nuisance to ranchers but there are alternatives for the wolf and it's existence. One of ideas would be to ask the ranchers to build a good quality fence around there land or pastures where the cattle are. The strong fence would act as a protection. I know it would be a lot of money to actually be able to buy a very good quantity of fence but MAYBE a little government funding could help with the some costs Set up some advertisements to help get funding and donations to help pay for the fences that should hold & protect the ranchers cattle. I'm sure a lot of people out there love wolves and would help with their donations. Then if the wolves at anytime get through the ranchers fences damage or not then the ranchers should have the right to destroy them. I think the Ranchers need to be more self motivated about protecting their cattle. Cows are easy game and the fences are also easy to cross. I would modify the ranchers SELF MOTIVATIONAL SKILLS. 2. Another suggestion would be to take the wolves from birth and raise them like pets like dogs. This would take along time but in the long run maybe wolves wouldn't have to depend on the ranchers cattle to a food source but rely on humans to feed them dog food & water. The first dog ever was just as wild a wolf. Dogs originated from wolves. If the dogs can do it then so can the wolves. In the long run of course. Wolves need a little help to understand and a little civilizational skills that could happen eventually over time and maybe soon they wouldn't be such a big problem.

E20: 1. Eliminate them. 2. They shoot buffalo when they leave Yellowstone Park. Why don't they shoot the wolves?

E21: 1. I am the owner of 50 acres in the North Fork of the Flathead River Valley. I am in favor of the preferred alternative because it provides flexibility to manage wolves over time and keeps control of the management process in Montana. I feel the preferred alternative is balanced and does not favor any one particular group. Thank you for your efforts to resolve these important and contentious issues. 2. I would like to see a better measure of wolf populations than number of breeding pairs. In this respect, I think Wyoming's definition of the number of packs would be a better measure.

E29: 1. I haven't had the time to read through all of the information you have given here but I am writing a paper on Wolf Management and I think what scares me most about taking the wolf OFF the endangered species list is that the public WILL NOT pay attention to the fact that they are still under management and that the will look at it as an OPEN HUNTING SEASON upon the wolf. Wolves were almost eradicated at one time what is there to prevent that from happening again? I am against them being taken off the endangered species list at this time unless it is made clear that there is NOT an OPEN HUNTING SEASON upon them and there will be heavy duty fines and even jail time for those killing wolves without prior permission.! If there is a link to this question somewhere in this vast cyber space you have here...please direct me to that link so I may further investigate. 2. Can't answer this at this time. Thanks.

E34: 1. Managing wolves at the state level is a desirable situation and I agree with some of plan. However I have listed below some vital modifications I feel should be implemented. 2. I applaud the effort to keep the wolves alive and managed however there are some modifications that should be implemented so the wolves do not face unnecessary deaths. Recovery goals should be based on viable self-sustaining populations without an artificial cap. The draft plan is too lenient in allowing the lethal take of wolves simply for threatening to kill livestock or pets - especially on public lands. The final plan should allow for only non-lethal deterrents in the case of wolves threatening livestock. Lethal control should only be used as a last resort when other methods have been exhausted and failed. Reasonable incentives for citizens working to reduce or avoid conflicts should be considered and adopted. It is important that livestock operators and owners also demonstrate responsible animal husbandry practices including the removal of dead livestock carcasses whenever possible treating and removing injured or diseased animals and avoiding active wolf den sites. Include a provision for a state wolf management advisory council to continue to identify discuss and discern management goals conflict resolutions and public education opportunities. Begin wolf management training for wolf biologists prior to delisting. Training should prepare biologists for management including radio collaring and monitoring wolves. Identify stronger penalties for illegal take of wolves. Identify reasonable and appropriate funding strategies for state management by working with stakeholders.

E40: 1. My concern is that there is a piece missing from the whole process. That of a geneticist. The total numbers of animals should NOT be the deciding factor in management strategies, but the numbers of BREEDING PAIRS should be determinative. What is missing is consideration of the size of the gene pool. Can we address this issue? (in Montana you say there are only 16 breeding pairs of wolves). I cite as example, the chimpanzees of the Gombi in Africa. Their gene pool is now isolated in a 30 sq.mile park, and the breeding pairs are decreasing threatening the entire species. The same happens to ground squirrels if more than 50% of the population is killed off and the same is happening to the grizzly as the gene pool decreases and the populations become more and more ISOLATED due to human encroachment on their habitat. Before we make decisions on such an important issue as part of OUR food chain, can we include some genetic information? Perhaps we can discuss a way to live with the other members of our food chain instead of killing them off for our immediate needs? I still find it amazing that someone would actually try to raise llamas or chickens or goats in wolf or bear habitat. Meantime we need more discussion and more reasonable people who do not have agendas of their own. Mostly we need to be inclusive of ALL information which impacts our decision. 2. Add a geneticist to the mix. Thanks for listening.

E42: 1. The Manhattan Wildlife Association a non profit organization of over 1000 members mostly made up of Montana Hunters and Shooters would like to endorse the Montana Shooting Sports Associations position concerning the Wolf EIS. 2. As described in the letter from the Montana Shooting Sports Association. Thank You

E46: 1. Listing wolf as trophy big game animal with seasons and limited draw permits. As seen from other species listed as big game animal in limited draw season framework they provide a significant stream of income (high priced nonresident fees) to manage the resources. And more often than not goes a long way to see that the species thrives and prospers to expand its range to be able increase the permit level and result economic impact for Game and Fish local economies and outfitters. Keep in the game go hunt wolfs. 2. No restrictions on resident / non-resident quotas. Equal chance for everyone no ten percent rule. Squared preference point system (see Nevada G&F) Allow baiting and hound hunting and trapping by permit also. Have a depredation list of hunters for problem wolves licensed with permit of course.

E53: 1. Leave the wolf protected the federal Endangered Species Act. 2. I believe that delisting the wolves and handing their population management over to the state is a death threat and will guarantee their final extirpation: through allowing legal hunting of wolves as a means of lethal control.

E55: 1. Congratulations on your success so far. Deliberations for Scotland will certainly look to you for ideas. In keeping with the modern trend towards nurturing our wildlife rather than only using it I would ask that your plans exclude sport or commercial hunting or trapping as this greatly offends the majority and is a downside of human progress. 2. see above comments

E72: 1. After reading your list of compiled comments the FW&P preferred management plan summary the complete list of Questions and Answers and considering my 50+ years of hunting fishing camping reading etc. I arrived at the following conclusions and attitudes about wolves in Montana: 1) The only way to successfully manage wolves is by direct control of their numbers. Our forefathers and settlers of Montana had it right the first time. They knew that people and agriculture came first and that any management plan that did not recognize these basic facts threatened their existence as viable families and communities. Thus they managed wolf problems with gun powder and steel traps. Sadly many now think that we can set the clock back ignore what history has taught us about wolf behavior and make room for them as if the last 150 years of white man's presence in Montana is of little or no significance. 2) If I am forced to accept the wolf presence in Montana without the bought with blood right to vote on the issue which appears will be the case as our Federal wildlife managers have already done this then I would recommend the following: a) without adequate funding in our State FW & P (we are a poor state you know) leave all costs with the Federals as they started the problem. Let them finish it. To hand this tragic mistake off to the Montana taxpayers and our own respected wildlife managers is just another betrayal. Let them fight over funds for the wolf in Congress at least I have some impact there when I go to the polls to vote. b) if the vocal minority of wolf lovers tree huggers and other misguided animals before people groups want free ranging wolves in Montana then tell them to put their money where their mouths are and pay for the privilege. c) if funding is found (without stealing from our hunting and fishing license funds) to hire and sustain a State wolf management department then let them manage the wolf as a big game animal and a fur bearer. This would bring in considerable revenue and would apply the most efficient form of wolf control known which is

trapping. The wolf pelt makes a pretty good dust catcher on your floor or on your wall. 3) Most Montana citizens highly value the decades of effort and millions of dollars that sportsmen and others have put into building up our game populations and habitat. The very real threat of losing much of these populations to increasing numbers of free ranging wolves with big appetites and killer instincts is a travesty to say the least. 4) Our WMAs are extremely vulnerable to wolf predation. Without them as solid protection for sustaining our big game herds all people of Montana will lose out one way or another. 5) Without quick and deadly control of wolf numbers there will be an across-the-board loss of confidence in our State Big Game Management systems even though they had little or no part in promoting wolf reintroduction. This would likely start a downward spiral of big game hunter support and a marked decrease of sales of hunting licenses. 6)An earlier comment to FW&P said Manage people and not wolves. That is the root attitude (based on feeling and not common sense or experience) of persons who have put the interests of the wolf ahead of human welfare. In effect they desire to change the Face of Montana at the expense of our big game herds and those that support them year in & year out. So far they are winning! They have managed to dump an unwanted wolf problem into our back yards and now they want to force us to live with it under their choice of rules. The best interests of the Montana citizen or our game herds has nothing to do with their emotional drive and zeal to see this gut ripping ham stringing carnivore living a protected existence in Montana. It is no wonder that many are willing to utilize the Three S system of wolf management Shoot Shovel and Shut Up. 2. I apologize for not following the instructions on this page and answering the questions. I could not find the five alternative Plans on your web site so could not address them. Please excuse my poor spelling. My Spell Checker does not work on this document. I realize that Montana would be better off if our FW&P had control of the wolf population and were left alone to manage them as big game animals. I doubt that this will happen because of all the adverse publicity and political pressures brought on by the emotional and misguided wolf lovers. Most of these pressure groups are from out of state and we seem to have lost our resolve in State politics to stand up to their foolish game management ideas and do what is best for our citizens and our game populations. For example our State level leadership was not strong enough to stand up to the same pressure groups that forced our FW&P to go belly up in regards the public hunting of Buffalo and Grizzly Bear. What a slap in the face to the Montana big game hunter and the FW&P! Will we continue to let these animal lovers push us around or will our leadership learn to stand its ground and speak the truth about wise game management? Thank you for the opportunity to make this comment. You have my permission to reprint it for comment purposes.

E79: 1. FWP preferred alternative. Big game hunting in Montana is an important economic asset for our state. The wolf population is a heavy determining factor on game numbers and hunter success. FWP is the best equipped agency to determine the best wolf/game balance. 2. I would like to have the fewest wolf packs possible for the benefit of the game population. After all there is a very good reason the wolf was eliminated in the past.

E80: 1. My wife and I have visited Montana and the Greater Yellowstone area 6 times in the past 12 years and intend to return. Much of our interest has centered around the abundant wildlife; wolf reintroduction has been a big part of that interest. The research that we have seen so far strongly supports the position that wolves are a keystone species in the area and that the ecosystem (not to mention the economy of Montana) is much healthier as a result. As such we urge you to keep this in mind as you consider delisting the wolf. While we would prefer not to be tied to a specific alternative we wish to suggest the following points. 1) The program's funding needs to be assured before delisting is considered. 2) There needs to be clear guidelines on when and under what conditions wolves can be killed. 3) Since so few cattle are actually killed by wolves we recommend that Montana pay for such losses. While this may sound unwise consider that much of the recent increased interest in Montana is driven by the excitement of wolves being reintroduced. I strongly suggest that the value wolves have for your economy strongly outweighs any reimbursement cost for lost livestock 4)Wolves should be managed as you manage other wildlife. That is there should be no artificial limits put on wolf populations. Rather they should be allowed to fluctuate in tune with the environment. Thank you for the opportunity to comment on the wolf recovery EIS. We urge you to do what is right for the ecosystem wolves and Montana's economy and not what may serve the short sighted goals of some entrenched interests. I can assure you that our interest in Montana will be greatly diminished if wolves are not allowed a place in Montana's ecology. 2. see my comments above

E86: 1. 2. After sitting in on a couple of public meetings I gathered that many local folks felt that 15 breeding pairs were too many (their words) and 10 pairs were too close to the baseline for delisting...perhaps 12 or 13 breeding pairs for this alternative would be more acceptable to the general public. 2. have a hunting season with minimum wolf plan.

E89: 1. I as an outsider in NJ who respects nature and people hope you will find a way to promote wolves to breed and live in safely in Montana despite the need to protect farmers residents hunters etc. 2. I would modify the number of hunting permits and quota of wolves killed to reflect a balance and not just a random upper limit.

E95: 1. Hello. I just finished reading the five alternatives and must say that while I think the Updated Council/preferred alternative is better than three of the others I don't believe it is adequate. At this point I prefer the No Action alternative. Here are my concerns: I like a lot of Americans are not satisfied that the U.S. Fish & Wildlife Service has yet to meet the legal requirements of the ESA for wolf recovery. I believe until those legal requirements are met (rather than sweeping them under the rug as though they don't exist) Montana should take no action. The No Action alternative is my recommendation. Wolves would remain on the endangered species list and the U.S. Fish and Wildlife Service would continue to manage wolves in Montana. The Updated Council/preferred alternative is lacking in several areas. One major area is that it will use a benchmark of 15 breading pairs to determine wolf management techniques. That is entirely too low to assure that even minimum viability will be possible over the long term. Science informs us so why not use it in drafting this plan? There is strong biological evidence that any population under 50 members likely faces extinction. So how in the world can we justify setting a benchmark of 30 animals? Especially when you don't provide for any assurances that those 15 breeding pairs will have genetic diversity or means to move from one pack to another for genetic interchange. If somehow or another we should get to the place where this benchmark is called upon and we have only 15 breeding pairs spread out around the state we can be almost assured that the wolf population won't be of minimum viability. Look at how many wolves have been legally killed just this year alone! You can see that it would take very little time to wipe out the last remaining 30 wolves. I realize that 15 breeding pairs is your minimum but several things in the DEIS lead me to believe that it is not out of the realm of possibility that we could quickly find ourselves at that bare minimum. In order for wolves to maintain genetic diversity and to account for loss due to death -- natural deaths as well as death by hunting livestock interactions illegal killing automobiles or other unintentional human caused deaths and struggles due to unsuitable or fragmented habitat -- having a significant number of wolves is essential. The benchmark numbers and recovery numbers in the preferred alternative are dramatically too low and there is no indication anywhere in the draft that Montana FWP has based anything on scientific evidence. It appears that 15 breeding pairs is mostly an arbitrary number as are the numbers in the other alternatives. It is not clear to me from reading the plan how Montana will be able to ensure that wolves will remain a recovered species. The benchmark for minimum numbers is entirely too low. In addition the plan doesn't call for sufficient education measures for Montana citizens and the results will be that wolves will continue to be killed illegally and in some of the legal cases unnecessarily. There must be more education planned in order to minimize illegal wolf kills. Wolves need to disperse from one pack and join with other dispersers to create new packs. The long-term survival of the species requires this genetic interchange. But without education humans will continue to make that difficult if not impossible. Montana has county governments passing resolutions that wolves will

not be allowed in their counties. It is highly likely that many dispersing wolves will be shot on sight and evidence of their messing with my livestock will come later. The Montana DEIS also plans to manage wolves by removing them from certain areas when FWP thinks it is necessary. In all likelihood that removal will be followed by new wolves moving into the same area because it is favorable wolf habitat. There is nothing in the Montana DEIS to address this problem. Hunting has great potential to cause additional wolf deaths besides just the trophy wolf. After hours of observations of wolves in the wild I can tell you that the death of one alpha wolf has repercussions throughout the pack. In some cases those repercussions will mean that other pack members will also die. The DEIS says that wolves will be managed much like mountain lions and bears but the wolf's social order makes it an entirely different animal and the DEIS does not address that fact. I don't believe that the preferred alternative protects the wolf nor do I believe it is strong enough to ensure that wolves will thrive in Montana for future generations. Despite what the plan intimates the facts are that the current wolf population in Montana is not currently at a recovered size. Given that plus the fact that the requirements of the ESA for wolf recovery have not yet been met I believe that wolves should remain on the endangered species list under U.S. Fish & Wildlife Service management. Please adopt the No Action alternative. 2. My first choice is the No Action alternative and I wouldn't modify anything about it. Please see above for my comments about your preferred alternative.

E97: 1. Like Defenders of Wildlife and the Alliance for the Wild Rockies I support and urge you to enlist the no action alternative for Montana. There isn't substantial scientific evidence to support the call for delisting. While wolves may have met federal "recovery goals" they fail to represent a recovered population considering studies show that thousands of wolves are needed to ensure genetic viability. The current population of little over 700 wolves in Montana does not promote genetic viability. Also in reference to ESA's requirement of a population regaining a "significant" amount of its historic territory wolves exist in less than 10% of their historic territories and this cannot be labeled as significant. Furthermore scientific evaluations of what percentage distribution would be seen as significant have yet to be conducted. In addition no population viability analysis based on genetics and demography was ever conducted in the Northern Rockies. No analyses of sustainable mortality or migration corridors have been prepared. Lacking this and other studies is the sole basis for the argument aimed at halting the wolf reclassification. Wolf recovery has been politically dominated and driven without the consultation of the best available science as obligated by the Endangered Species Act. This premise is what infuriates wolf supporters. Organizations such as Defenders of Wildlife have taken legal measures to prevent the delisting of the gray wolf. Rodger Schlickeinsen president of Defenders of Wildlife emphasizes "It saddens us to have to have to take this step when we've made such a tremendous start toward real sustainable wolf recovery. But by backing away from wolf protection before the job is finished Secretary Norton is endangering everything her agency has achieved so far". (Defenders of Wildlife Press Release 4/1/03) However delisting proponents insist that recovery has been substantial. In response to Defenders of Wildlife Todd O'Hair – Gov. Judy Martz's (MT) natural resource advisor – proclaims that "Defenders of Wildlife ought to be celebrating" due to the fact that since '95 and '96 - when three dozen animals were reintroduced in Yellowstone and central Idaho - numbers have rocketed to over 700 animals in the state. (McMillion) Others on the side of the federal government believe that the FWS has done its job to facilitate recovery et groups such as Defenders of Wildlife and Alliance for the Wild Rockies persist with their convictions that delisting isn't supported by adequate science required by law. Despite wolves having some legal protections in Montana Idaho and Wyoming after delisting if they roam into Washington Oregon Nevada California or northern Utah or Colorado they then have no federal protections. Furthermore the Defenders of Wildlife point out that the FWS is exclaiming that wolves are currently "recovered" across their vast stretch of historic range yet the FWS hasn't made any progress in recovering species in these areas. For example only three of nine northwest states that have vast historic habitat available within the Northwest Population Segment have made recovery efforts (MT ID and WY). Also the organization underscores the faulty DPS designations. The FWS's designations of Distinct Population Segments "were not created based on science or to promote wolf recovery but rather were developed simply to clear the way for the Service to move as quickly as possible to the elimination of all ESA protections for wolves in the coterminous United States". 2. Subsequently would insist upon the no action alternative for the Montana Wolf Plan EIS. The listing of wolves under the ESA should remain classified as endangered and the management responsibilities should be left to the USFWS. Whether the benchmark number of 15 breeding pairs in Montana needs to be maintained or increased is of less importance than the dire need for complete scientific analysis of all the discussed factors. Significant scientific data is essential for determining the actual status of the wolf's presence and future in the United States and even more so for establishing reason for reclassification much less delisting

Wolf Numbers

Summary of Comments: Some comments question the need to establish a benchmark number of breeding pairs for adaptive management at all. Other comments pinpoint the specific wolf numbers used in the alternatives (especially 2 and 3) – saying that these are either too low, too high, seemed arbitrary, or had no scientific basis. Some comments mistakenly interpret the benchmark as a population cap and say that the wolf population in Montana should not be capped at that level. Other comments want the wolf population to increase indefinitely without management constraint, whereas other comments say that the wolf population should be limited at the lowest level possible if it couldn't be eliminated altogether. Closely related comments conclude that the population is already too high. Some comments question USFWS's assessment of wolf population viability in the northern Rockies relative to the recovery goal.

Response: USFWS determined that the wolf population in the northern Rockies would be biologically recovered when a total of 30 breeding pairs by the recovery definition is reached for three years in a row. USFWS's determination of the recovery goals and the long term viability of the wolf population received independent, scientific peer review and were determined to be adequate. Changing the recovery goal or revisiting the viability determination is beyond the scope of FWP authority and the draft EIS. Nonetheless, the federally required 30 total breeding pairs could be equitably divided by the three states which will be required to maintain the recovered population. Montana, Idaho, and Wyoming have each committed to maintaining a third of the required total number of breeding pairs since the federal recovery lines crossing state boundaries dissolve upon delisting. Each state would then manage the wolves within their respective state boundaries.

The No Action alternative is the continuation of the federal recovery program. Wolf numbers in that alternative are as per recovery criteria established in the original wolf recovery plan and projections published in the Yellowstone Reintroduction EIS. The number of wolf pairs in the Minimum Wolf Alternative is based on the premise that Montana would maintain its minimum commitment (or 10 breeding pairs) to the tri-state total of 30. The 15 breeding pairs in the Updated Council Alternative is based on the recommendations of the Interagency Technical Committee that served the Montana Wolf Management Advisory Council during its deliberations. The Technical Committee also consulted with other wolf experts. Their recommendation was based on the premise that 15 breeding pairs would be a minimum for a viable population that would still allow management flexibility and implementation of most tools being considered by the Council. FWP, in response to public comment, wanted to include and analyze an alternative that called for "more" wolves and choose to present one with 20 breeding pairs as the adaptive management benchmark. FWP arbitrarily selected 20, but could've just as easily analyzed 17, 25 or 100. A total of 20 pairs was five more than the preferred alternative and twice as many as the Minimum Wolf Alternative.

FWP clarifies that the benchmark of 15 breeding pairs in the preferred alternative does not function as a population "cap" in that the population would be limited to being only 15 breeding pairs in size. The benchmark serves as a signal to managers that an adjustment in management decisions should be made, either in the more liberal or conservative direction. A more objective basis for decision-making is established by using a benchmark signal. The impacts analysis of this alternative indicates that there would be more than 15 breeding pairs present in Montana in 2015 if all the predictive assumptions are valid and the population performs as FWP assumed it would in response to implementation of the specific conservation and management tools. In its preferred alternative, FWP is trying to build a program that maintains a viable wolf population that is biologically possible for wolves and their prey base, socially acceptable to a wide variety of stakeholders, and economically feasible for the agency to implement. Managing wolf numbers is an important facet of that goal.

Representative Comments

W72: Can we manage them at total wolf numbers? Some kind of consideration given to total numbers in addition to number of pairs.

W73: As a hunter, I am concerned about the total number of mouths. I like wolves, but if it impacts my hunting, something needs to be done.

W104: I prefer alternative #3. Setting a benchmark of 20 is going to allow us to keep them off the list (more flexible).

W148: Benchmark is artificial and why limit ourselves?

W177: I am uncertain about the arbitrary 15.

W194: I like #4 because it limits breeding pairs to 10 pairs. I think livestock producers should be compensated for losses, but not by hunting license dollars. Should be compensated by feds. Don't want to feed wildlife to wolves. Hunting dollars paid for the wildlife. Hunters should harvest the excess wolves to manage wolves in an area.

W200: Benchmark seems more like a limit. I question if hunting wolves is necessary in general. I think wolf numbers will be controlled enough through depredation actions.

W221: With alternative 4, we'll have to put with so many wolves. If they drop below a certain number, we loose control. I prefer alternative 2 so we don't have to worry about backsliding from the threshold.

W231: Breeding pair numbers are irrelevant. We'll be so far over those thresholds so quickly that they're meaningless.

W316: Sufficient wolves to avoid relisting.

W336: How come35 packs and only 16 breeding pairs?

W370: Guard against numbers getting too low or we get federal control.

W374: Not good to keep number of pairs at 10 because it limits ability to eliminate problem packs. Trade-off is more wolves. W502: As a farmer/rancher, the only good wolf is a dead wolf. When they go beyond federal land, the rancher should have the right to shoot or trap them. Fifteen pairs x 5 = 75 wolves: in a couple of years, the population can multiply really fast.

W514: Likes Alternative #2, but would like to see a higher number of breeding pairs, but 15 pairs is more socially acceptable.

W555: I support alterative, but set the breeding pairs at 12.

W574: Alternative #2 modified to bring benchmark down to 10 pairs.

W598: I am concerned that Alternative #2 has no upper limit.

W750: I would like to see the breeding pair numbers increased by a factor of 5 for each of the alternatives to maintain a healthy population.

W1018: Wolves are one more predator on top of what we have; less wolves are better.

W1098: Could there be a bounty someday? Current wolf numbers are out of control.

W1166: No cap on he number of packs.

W1182: A cap on the number of wolves is necessary.

W1317: If management goes to 20 breeding pairs, does this allow Idaho or Wyoming to go below 10?

W1435: 15 breeding pairs is cutting it close. Could have a disaster impact the population. Would prefer a minimum of 20 breeding pairs.

W1467: I would like to see the wolf population managed at a low level.

W1: The more wolves we have, the less deer and elk we will have.

W1462: Provide scientific justification for the numbers of breeding pairs allowed (e.g. population viability analysis PVA).

W13: Alternative #2 – but how many wolves do we actually need?

W32: 1. Alternative 2 with revision – 15 packs are about 3 too many – we have packs now that simply cannot stay out of trouble, so need to reduce to about 12. 2. Change to 12 packs, need funding assistance from other sources than the state. Livestock owners need more flexibility in taking emergency action when animals threatened.

W63: 1. Alternative #1. Local feelings are unfriendly to wolves. All other plans have breeding pair limits that are much too low. Depart. of Livestock has an adequate compensation system. I totally oppose hunting wolves, as well as bears and mountain lions. Why waste scare state funds when we can rely on federal dollars? 2. Nothing. More action is needed at the federal level.

W69: 1) Alternative #1, No Action. Do not delist. The wolf is not sufficiently recovered to begin managing them as a furbearing game animal. Funding, private and state funding a possibility in combination with federal funds, especially for education. 2) Revisit the issue in a few decades. Defenders of Wildlife continue compensation program.

W71: 1) Alternative #1 comes closest for me. 2) I don't think there should be arbitrary numbers set for breeding pairs. The carrying capacity of the land should dictate. The plan should be adjusted as populations are studied and hopefully grow. No habitat boundaries should be established.

W84: 1) Alternative #3. 2). Need some kind of compensation program. Biggest concern is an artificial number set upon wolf population. I fear that as soon as 20 or 15 pairs is met, it will be considered too high or a problem whether it is a problem or not. Flexibility with wolf numbers is key.

W85: 1) Alternative #5 while we wait for all states to develop plans. Increased local involvement. 2) Avoid the "benchmark" number of 15 and instead manage wolf population using numbers and pack numbers, in such a way to minimize local effects on ranging livestock and game populations.

W112: Alternative #4. Less numbers, less problems. No state funds.

L0136: 1) Minimum wolf because I feel that any additional packs of predators would severely deplete game herds as well as giving government agencies the excuse to close more land. 2) I would tell the USFWS to butt out of Montana's affairs. Also public hunting and fishing license fees should not be used to fund any part of the wolf program.
L0107: 1) #4. The fewer, the better, try to keep them in the west, we don't need them statewide. 2) Help protect the ranchers of western Montana and also ranchers across Montana. Special tags to hunt a few in Montana

L0036: Of the alternatives presented, only "No Action" appears to satisfy the basic legal and biological requirements of the Endangered Species Act. Any action alternative should, in my mind, adopt the principles of sound conservation biology. FWP should not adopt a wolf conservation and management program until these minimum standards have been met. Until that time, wolves should remain on the endangered species list and the U.S. Fish and Wildlife Service should continue to manage wolves in Montana. A benchmark of 15 pairs, 20 breeding pairs, or 10 breeding pairs in Montana each fail to achieve minimum viable population levels. Neither will an agreement with federal authorities to employ the Advisory Council's recommendations to manage wolves and resolve wolf-related conflicts achieve viable population levels. Wolves may have met federal "recovery goals", however these goals do not accurately represent a recovered population. USFWS has not conducted a population viability study based on scientific evidence. The arbitrary "15 pack" level proposed in the preferred alternative is simply a number that has been assigned and has not been tested and proven to produce a viable wolf population. Wolves exist in 10% of their native range. Scientific studies must be conducted to determine what level of occupation and distribution of their native territories constitutes "significant" distribution levels. These studies have not yet been conducted. The scientific literature on long-term viability for genetic concerns alone requires an effective breeding population size of at least 500, which translates into total population size in the thousands. No sustainable mortality level ahs been calculated. And no analysis of migration corridors needed to maintain adequate levels of genetic interchange throughout the region has been prepared. To date, wolf recovery and management in the Northern Rockies has been politically driven. Until there is an adequate consideration of the best available science, as required by the Endangered Species Act, the No Action Alternative is the only option that satisfies the minimum biological and legal requirements of the Act.

L0146: 1) Alternative 1. Twelve to fifteen breeding pairs statewide is a ridiculously small number for a state the size of Montana. The ranching industry is being given too much consideration - livestock losses - within limits are an acceptable price to pay for a healthy predator population, statewide. 2) As wolf populations increase and require controls, I advocate rifle hunting only. No trapping should be allowed. Bring wolves back to the Missouri Breaks in the new National movement.

L0169: 1) Alternative #1. 2) Wolves have not recovered to the point where they can be managed under any of the other plans.

L0276: There should be NO WOLVES in Fergus County and I support [Resolution No. 6-2003]. There should be a minimum number of breeding packs. They must be located in National Parks, not on any Forest Service or BLM-managed land used for livestock grazing because these animals cannot exist together without causing problems. The wolves would have to be closely monitored to keep their numbers under control to meet their food supply in the National Parks. If they should stray from their immediate area, they should be trapped and returned or sent to a zoo where they can be seen by people who think they are important. There should not be any wolves allowed to exist in Central or Eastern Montana. To prevent their movement here, we need a mandate that they be shot on sight with a $1000 bounty.

L0238: Please accept these comments on behalf of the board and over 800 member families of the Kettle Range Conservation Group who live, work and/or recreate in the Columbia River Basin. Our mission is to defend wilderness, protect biodiversity, and restore ecosystems of the Columbia River Basin.

We are concerned that taking Montana wolves off the Endangered Species List would be a regressive move that will further endanger the state's small wolf population, threaten the genetic integrity of nearby metapopulations in Idaho and Wyoming, and set a negative precedence for science-based wolf recovery efforts in other states.

We agree with and sign-on to the following comments submitted by the Alliance for the Wild Rockies:

Upon review of the five alternatives in the Draft EIS, Alliance for the Wild Rockies supports the No Action Alternative, (no delisting or state management at this time). Wolves would remain on the endangered species list and the U.S. Fish and Wildlife Service would continue to manage wolves in the state of Montana until the legal requirements for recovery under the Endangered Species Act (ESA) are satisfied.

The Endangered Species Act

The Endangered Species Act (16 U.S.C. § 1531 et seq.) provides for the "conservation of the ecosystems upon which threatened and endangered species depend." "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary. The U.S. Fish & Wildlife Service is required as a matter of law to develop plans to maintain and restore wolves in order to ensure their survival, recovery and eventual delisting under the ESA. The designation of an adequate area of habitat is inextricably linked with the recovery planning process. All aspects of the ESA recovery process must be guided by the best available scientific information.

Recovery Plans

50 C.F.R 402.02, as noted in Fund For Animals, provides that the Recovery Plan is a "basic road map to recovery, i.e. the process that stops or reverses the decline of a species and neutralizes threats to its existence." The Recovery Plan is intended to provide a means for achieving the species' long term survival in nature." Fund for Animals v. Babbitt, 903 F. Supp 96, 103 (D. D.C.1995).

The Recovery Plan shall, "to the maximum extent practicable" incorporate: (1) site-specific management action; and (2) objective, measurable criteria by which to monitor recovery. 16 U.S.C § 1533(f). Site specific actions shall include those actions the agency finds "necessary to achieve the plan's goals for the conservation and survival of the species." 16 U.S.C. § 1533(f)(1)(B)(i). The RP need not be exhaustively detailed, when the Service has recommended protective actions or explained why "impractical" to do so, it has met its burden. Fund For Animals, at 107, 110.

Because the same five statutory factors must be considered in delisting as in listing, the Service must address each of the factors that led to the original listing in designing the "objective measurable criteria" for the recovery plan. Fund for Animals, at 111;16 U.S.C §1533 (a), (b), (c).

It is our position that in regards to wolves, the U.S. Fish & Wildlife Service has not satisfied the legal requirements of the ESA. Therefore, removal of ESA protections from wolves and abdication of management authority to the State of Montana is inappropriate and premature until such time as recovery as per the legal requirements of the ESA has been achieved.

The number of wolves represented in the remaining alternatives is arbitrary and based on politics and not sound science. The Wolf Reintroduction DEIS and FEIS (U.S. Fish & Wildlife service 1993; 1994) stated that the recovery goals would provide for "minimum viability." However, no formal peer reviewed scientific analysis of viability based on genetics and demography has ever been done to support these goals. A key determinant is not just the total population size (N), but also the effective breeding population size (Ne). The draft EIS alternatives provide for just 10-20 breeding pairs. Extinction risks become severe whenever breeding populations drop below 50 (Shaffer and Samson 1985) and if these numbers become too small, the population can enter into an irreversible decline or "extinction vortex" (Gilpin and Soule 1986).

Classically, Ne has been set at 500 (Franklin 1980). However, Lynch and Lande (1998) suggest minimum Ne should be closer to 5000 while Franklin and Frankham (1998) suggest minimum Ne need not be larger than about 1000. While accepting the legitimacy of this debate, we believe that Ne = 500 is conservative and appropriate in this instance, since the current state of knowledge regarding wolf population viability does not allow for pinpoint precision. Thus, Ne = 500 provides a reasonable management goal at this time. The Montana Wolf Management DEIS alternatives outlines wolf numbers ranging from 10-20 breeding pairs. This equates to an Ne of just 20-40, a small fraction of the minimum Ne of 500 needed to prevent significant population declines associated with the "extinction vortex".

Wolf populations exhibit major fluctuations depending on the availability of food sources and suitable habitat. Frankham (1995) found that the instability of populations result in lower Ne:N. In assessing Ne:N ratios for conservation purposes, Nunney & Campbell (1993) suggested total N should be 5-10 times the value for Ne. With portions of the Idaho and Wyoming recovery zones overlapping into the state of Montana, Montana should be expected to provide 1/3 to 1/2 of all the wolves in the northwest. At a minimum Ne of 500, Montana's share of an effective breeding population for long-term demographic and genetic viability should be in the range of 165-250, or approximately 83-125 breeding pairs, compared to the 10-20 breeding pairs the alternatives offer. At average pack sizes of 5-7 in the Northwest Montana Recovery Area (USFWS et al. 2001), Montana would need to contain approximately 415-875 wolves, compared to the 183 confirmed at the end of 2002. This is not an unreasonable goal considering there are 1,500 wolves in northern Minnesota, an area with far less public lands, wilderness and national parks than Montana. Having a significant number of wolves is essential to retain genetic viability in the face of high mortality due to wolf/livestock interactions and the lack of contiguous habitat.

The recovery goal figures do not accurately represent a recovered population. The above studies have shown that thousands of individuals are required to have genetic viability, not hundreds. USFWS has not conducted a population viability study based on scientific evidence. The arbitrary "10-20 breeding pair" level is simply a number that has been assigned and has not been tested and proven to be a viable level. The science is not there to prove this.

Habitat area is uncertain and unprotected. Wolves in the Northern Rockies exist as a metapopulation consisting of three core areas. However, current U.S. Fish & Wildlife Service recovery policy direction fails to establish effective habitat linkages between these three core areas.

Therefore, without linkages, the benefits of metapopulations decrease dramatically due to lower rates of genetic interchange. These populations must have suitable, protected habitat areas in which to survive. Currently wolves only exist in 2% of their native territory in the United States. In Montana, livestock receives far more protection on public and private lands than wildlife.

Some scientific investigators have suggested the appropriate scale for capturing broader environmental phenomena may be 10-15 and as much as 50-100 times the size of the largest disturbance patch (Shugart & West 1981). In the Northern Rockies, wildfires burned ≈ 10,460 km2 in 1988 (National Interagency Fire Center). Using this as the size of the largest disturbance patch, a minimum dynamic area (Pickett & Thompson 1978) in the U.S. Northern Rockies may be ≈ 104,606-156,909 km2, and possibly even > 500,000 km2. As a top level predator that is wide-ranging, it is reasonable to conclude that wolves will need a protected habitat area consistent with an area of this size.

The size does count when designing effective reserve networks. For example, larger reserves are known to hold more species, better support wide-ranging species such as grizzly bears, and have lower extinction rates than smaller reserves (Meffe & Carroll 1994). In a review of western national parks, (Bekele 1980, cited in Harris 1984) found the two largest (Yellowstone and Glacier) had retained a greater number of large mammal species than any of the others.

Wolves are also highly vulnerable to “sink habitats”. These areas have proven to be deadly to many wolves over a period of time. Removing wolves or packs of wolves from “sink habitats” means other wolves will continue to move into such areas, repeating the cycle of high mortality. More needs to be done to reduce conflicts and reduce the amount of “sink” habitats. The Ninemile Valley in NW Montana is becoming a well-known trap for the wolves that have resided there for the last 15 years. There have been eight wolves killed in the same area within the last two years. Wolf mortality as an annual percentage of the total population is likely to be high.

Metapopulations, classically defined by Levins (1969) as a collection of populations, often occupy patches of source (where reproduction exceeds mortality) and sink habitats (where mortality exceeds reproduction) (see McCullough [1996] and Meffe and Carroll [1994] for more detailed assessments of metapopulation structures). Populations in sink areas can avoid extirpations through demographic "rescue effects" by immigrating wolves from areas connected to the sink (Brown and Kodric-Brown 1977). Immigrants from other patches can also prevent local extirpations or serve as a source of refounders for vacant patches of suitable habitat. Source habitats allow and provide dispersing members of the species to replenish sink habitats. Metapopulation structures also provide a mechanism for spreading risk among populations (Rieman and McIntyre 1993). Mangel and Tier (1994) suggest that metapopulation structures may be more resilient in the face of catastrophes, since there is less likelihood that all the habitat patches (subpopulations) would be wiped out by the same catastrophe since risk is spread among the various sub-populations.

While it is true that wolves in Montana likely experience some level of genetic interchange with wolves residing in Idaho and Wyoming, the U.S. Fish & Wildlife Service goals, as well as those of the other two states, are not significantly different from those in the Montana DEIS. The low N in these isolated and unprotected core areas is of concern in light of the Allee effect (Allee, et al. 1949), defined by the occurrence of a low-density extinction threshold (Nunney & Campbell 1993), which can arise from the difficulty of locating suitable mates when populations are small. Without effective interchange, wolves within the isolated core areas will remain far below viable levels, and will remain vulnerable to excessive risks from inbreeding effects and genetic drift.

According to the Endangered Species Act, species must regain a "significant" amount of their native territories to be considered recovered. Wolves exist in less than 2% of their native territories. Two percent cannot be considered to be significant. Scientific studies must be conducted to determine at what percentage of historic distribution would be considered "significant".

It is clear that based upon the best available scientific information presented above, removal of ESA protections from wolves in Montana is premature at this time. Moreover, public support for wolves needs to be increased in order to minimize illegal mortality. There have already been 25 wolves killed in Montana in 2003, nearly 15% of the entire population of wolves in the state.

Unfortunately, legal and illegal killing will continue until extensive education and outreach actually begins to make a difference. In addition, habitats will shrink and prey base will fluctuate causing natural mortality rates to increase as well. We must compensate that with a scientifically proven viable population of genetically healthy wolves that can successfully sustain legal, illegal and natural mortality and still increase to viable levels. The current population is not viable and cannot withstand these natural and human caused stresses, therefore claims of recovery are premature at this time. Wolves should remain on the endangered species list under U.S. Fish & Wildlife Service management at this time.

Thank you for the opportunity to comment on this proposal, and please keep me informed at this address of ongoing developments regarding the State of Montana Draft Environmental Impact Statement on Wolf Management.

L0295: We urge MFWP to consider and adopt alternative #4. We are extremely concerned with the impact of the growing wolf population. We would rather have seen a continuation of existing numbers of the wolves before reintroduction, but since that isn't a choice we have alternative #4 would be better than the other choices available. Limiting the wolf pairs to 10 might give a fighting chance to sustain the elk, sheep and deer populations. In the history of out state it has been proven that wolves are predators that devastate wildlife populations and the surrounding ranches and their livestock. How can this be a good all-around plan? Being a good steward of our land is an important job worth doing well. Please consider limiting wolves.

L0303: I demand that you vote for alternative 4 of the FWP plan minimum wolves held at 10 breeding pairs.

L0009: 1) #4 starting with the lowest number of pairs since we know they will increase at least at the rate now.

L0065: 1) Alternative #3, 20 breeding pairs, huntable population. 2) State of Montana and others develop compensation program.

L0079: 1) I would like to see alternative 1 or 3 adopted. There is plenty of wild land available to sustain many packs of wolves in Montana. 2) Assure that there is follow-up and monitoring of wolf pack and how they reproduce, how many are poached, where possible predation is occurring to allow the best protection for wolves that are released. If wolf packs are where they need to be there will be little human interaction.

L0081: 1) Alternative 1 because the breeding pair benchmark in the other alternatives is arbitrary. Minnesota maintains a wolf population of around 2600, with 79,617 square miles of land base. This makes the average density of wolves in MN about 1 wolf per 10-15 square miles. Montana on the other hand has 145,556 square miles of land base. 2) Limiting wolves to 15 packs per 150 wolves, means a wolf density of about 1 wolf per 725 square miles. Base the number of wolves in the state on available and sustainable habitat, not random population number.

L0098: 1) Best is #5 because I'm concerned Montanans will be negatively affected by increasing wolf numbers and distribution due to lack of management if wolf not de-listed quickly. Would also support #4 and #2 in that order. 2) My biggest concern is that rural Montanans, the majority of which oppose wolf populations on their private and leased lands, are being required to pay the entire price, in money and in cost to lifestyle, while the majority of pro-wolf are out of state and country, people who pay nothing. Please work on a system to get pro-wolf people to bear the cost.

L0330: Montana Bowhunters Association acknowledge that wolves are here to stay. It is Montana's best interest to see the wolf de-listed and the MDFWP gain management responsibility as quickly as possible. The MBA considers alternative #2 with some modifications, as the best chance for the dept. to maintain wolf populations, wildlife populations, and hunting opportunity and provide a margin of safety for the livestock industry. Wolves should not be managed at the expense of our deer, elk, and moose populations. Our traditional hunting heritage must be preserved in favor of wolves. When prey species numbers are low, aggressive control methods should be applied to control wolf numbers. Preferred benchmark 15 breeding pairs is too high in our opinion. Allowing for 12 breeding pairs is a reasonable compromise that gives a 20% margin of safety above the minimum level. Wolves should be limited to large contiguous public land areas where the potential for conflict is the lowest. They should not be allowed to habitat areas of private property in eastern Montana, nor any major agriculture and livestock producing areas. Support compensation program for livestock owners for losses at fair market value. Funds from the general license account should not be used to compensate for depredation losses. Allow livestock producers and landowners to shoot wolves in order to protect their livestock and property. Allow for a regulated harvest of wolves. The MBA encourages the department to seek federal financial or private assistance to monitor wolf populations. Our license dollars should not be allocated for wolf monitoring. We expect to see litigation used as a means to prolong the delisting process. It's vitally important that the department request some management responsibilities for the interim period that will allow them some control over expanding wolf populations.

E6: 1. The minimum wolf alternative is the best of the choices next to eliminating them entirely. 2. Keep a VERY minimal amount (10 or even less) of breeding pairs inside Yellowstone Park and make the wolves unrestricted legal game at ANY time they are found where legal hunting and or shooting is allowed.

E7: 1. I am satisfied with FWP's recommendation of 15 breeding pairs. My concern is that the de-listing processing will not occur quickly. The numbers of elk calves are quite low. I for one am not willing to sacrifice our elk herd. 2. Faster implementation

E20: 1. Eliminate them. 2. They shoot buffalo when they leave Yellowstone Park. Why don't they shoot the wolves?

E28: 1. Additional Wolf Alternative--with greater numbers of wolves there might be a chance for them actually to thrive amidst a continued public ignorance and paranoia about these valuable animals. 2. Personally I would wish for the classification to remain endangered but am not fully aware of how the State would effectively manage such a population. The minimum number of breeding pairs should be at least 20. Wolves should be managed like other wildlife such as elk bears and mountain lions with no artificial limits on wolf numbers or boundaries.

E30: 1. No Action is the alternative that best addresses my concerns about the future of wolf management. I support retaining wolves on the federal endangered species list and favor having US Fish and Wildlife continue to manage wolves in Montana. Reasons: 1) The current numbers of wolves in Montana do not accurately represent a recovered population. Studies have shown that thousands of individuals are required to have genetic viability not hundreds. USFWS has not conducted a population viability study based on scientific evidence. The arbitrary 15 pack level is simply a number that has been assigned and has not been tested and proven to be a viable level. Sufficient scientific evidence does not exist to prove this. No Population Viability Analysis has ever been prepared for wolves in the Northern Rockies. The Reintroduction DEIS and FEIS (1993; 1994) simply assumed that the recovery goals would provide for minimum viability. However no formal scientific analysis of viability based on genetics and demography has ever been done. Thus it is inappropriate to de-list wolves and turn management authority over to the states prior to having this vital information. There is widespread agreement in the scientific literature that long-term viability for genetic concerns alone requires an effective breeding population size of at least 500 which translates into total population size in the thousands. Also no analysis of migration corridors needed to maintain adequate levels of genetic interchange throughout the region has been prepared. 2) According to the Endangered Species plan species must regain a significant amount of their native territories to be considered recovered. Wolves exist in less than 10% of their native territories. 10% is not significant. Scientific studies must be conducted to determine what percentage of distribution would be considered significant. These studies have not been conducted. 3) With all of the animosity and the uneducated accusations that residents are placing on wolves now is not the time for delisting. Montana has proven that they cannot be responsible enough to ensure a viable population of wolves when in this state alone there have already been 19 wolves killed in 2003. That's over 10% of the entire population of wolves in the state! No analysis of sustainable mortality has been calculated that would be in concert with a population viability analysis. Wolf recovery in the Northern Rockies has been politically driven without adequate consideration of the best available science as required by the Endangered Species Act. 2. I would make the requirements necessary for a USFWS agent to kill a wolf much stricter than those currently in place. 25 wolves have already been killed legally in Montana since the beginning of the year! Ranchers must be held much more accountable for protecting their livestock without the use of lethal means of control for our wildlife.

E40: 1. My concern is that there is a piece missing from the whole process that of a geneticist. The total numbers of animals should NOT be the deciding factor in management strategies but the numbers of BREEDING PAIRS should be determinative. What is missing is consideration of the size of the gene pool. Can we address this issue? (in Montana you say there are only 16 breeding pairs of wolves). I cite as example the chimpanzees of the Gombi in Africa. Their gene pool is now isolated in a 30 sq. mile park and the breeding pairs are decreasing threatening the entire species. The same happens to ground squirrels if more that 50% of the population is killed off and the same is happening to the grizzly as the gene pool decreases and the populations become more and more ISOLATED due to human encroachment on their habitat. Before we make decisions on such an important issue as part of OUR food chain can we include some genetic information?? Perhaps we can discuss a way to live with the other members of our food chain instead of killing them off for our immediate needs? I still find it amazing that someone would actually try to raise llamas or chickens or goats in wolf or bear habitat. Meantime we need more discussion and more reasonable people who do not have agendas of their own. Mostly we need to be inclusive of ALL information which impacts our decisions. 2. Add a geneticist to the mix. Thanks for listening.

E52: 1. Alternative 1. No Action. The gray wolf should not be taken off the endangered species list until their population goes up more. There have to be more breeding pairs before using Alternative 2. Lethal take should only be in defense of life not property. I am against regulated hunting as of yet. 2. Increase the minimum number of breeding pairs under Alternative 2.

E73: 1. Combination of Alternatives 2 and 4. 2. I would like to see a combination of Alternatives 2 and 4 with setting the benchmark at 12 breeding pairs. This would give some leeway above the minimum level established by the USFWS. I believe it's vitally important to give as much autonomy for management to Montana FWP. I also believe that since the USFWS is charged with establishing and monitoring endangered and threatened species much of the bill for reintroduction should be handled with federal dollars. I would hope that federal funding levels under such a proposal would be close to 100% as I understand monitoring would continue to be intensive for several years. Thank you for the opportunity to comment.

E77: 1. Alternative 3 (more wolves) comes the closest to reflecting my beliefs about how wolves should be managed considering the public's mixed feelings about wolves. I would like to see them managed forever as threatened species with a return to endangered listing if numbers drop precipitously. I understand that management must occur knowing that management in many people's minds means killing. It troubles me greatly that Montana has 120-180 wolves and we're talking about maintaining only 10-20 breeding pairs. Where do the rest of them go? I am extremely concerned that some counties have adopted a zero tolerance policies toward wolves and that legislation was introduced in the 2003 session to list them as predators. Given that type of public sentiment I believe we who support wolves as part of the ecosystem will be lucky to have in place a FWP management plan that protects wolves to some extent. I understand ranchers' concerns as I come from a rural background but I believe they must view wolves the same way they view disease accidental death etc. among livestock: Predation is part of the equation. 2. Take more time to determine how many breeding pairs we will accept. I think adopting a hard and fast number 15 breeding pairs or 10 breeding pairs is arbitrary. Once the federal government delists them we should manage them on a case by case basis allowing them to be killed only when they are directly attacking livestock and then see how many are left in say five years. Then we will have a better idea how many breeding pairs to maintain. I predict large numbers of them are going to be killed illegally and immediately once they are delisted. Key to my comments is the belief that the penalties for killing wolves illegally should be very high and that FWP should pursue the illegal killing as aggressively as it pursues game animal poaching. The public should be encouraged to use the hotline to report wolf killings. Public education is also critical. The public needs to be educated about wolf behavior debunking the ridiculous fairy tale image of them as stalking and killing humans etc. Wolves should be included in nongame animal education programs even though at times they may be managed as game animals. FWP and the feds have done a good job of this via public forums etc. but we've only just begun. The public who support wolves have an obligation too. The Defenders of Wildlife and other conservation groups who reimburse ranchers for wolf kills are to be commended and encouraged. Thanks for taking the time to hear me.

E81: 1. None of the alternatives are not acceptable as they allow too many Wolves and do ensure the protection of game animals and live stock. I have personally have witnessed the degradation of game population and hunting opportunities since Wolf reintroduction Hunting Pays for wildlife management in Montana and is a significant part of Montana's economy. Alternative #4 is closest but must be modified to address the above concerns. 2. reduce wolf population to a minimum

Wolf Distribution

Summary of Comments: Comments from eastern Montana recommend that FWP establish a "zone" to limit wolf distribution to western Montana. FWP received other comments suggesting that wolves should not be restricted to just western Montana and primarily on public lands – wolves should be distributed throughout Montana. Other comments suggest that wolf distribution should be limited to public lands only and that wolves should be "zoned" out of private property. Other comments support restricting wolf distribution to national parks or wilderness areas only. FWP also received comments supporting the adaptive framework of encouraging wolves to become distributed in those areas where there is the least potential for conflict.

Response: The preferred alternative seeks a balance between the biological needs of wolves and the concerns of people. The adaptive framework allows FWP to conserve and manage wolves within the context of human social tolerance, wolf ecology, and Montana's requirement to sustain a recovered population by letting wolves find their place on the landscape. Montana can meet its commitment towards the tri-state total based on where wolves are distributed presently. However, the gray wolf is a wide-ranging animal that is capable of long distance movements. Movements up to 500 miles have been documented. It would be impractical, if not impossible, to keep wolves from moving beyond the current distribution into presently unoccupied areas. However there is nothing in the preferred alternative that would a priori require an increase in wolf distribution beyond the present distribution, so long as the number of breeding pairs was adequate to meet connectivity requirements. Rather than establish a management premise that FWP can't fulfill, FWP follows the recommendations of the Wolf Advisory Council in choosing instead to build a broad and flexible management program that allows wolves to distribute themselves according to their ecological requirements and as per social tolerance. It has been FWP's experience that as long as conflicts are addressed effectively and swiftly, large carnivores and people can coexist. Wolf presence in northwest Montana over the last 20 years has also demonstrated that coexistence is possible for wolves in Montana.

Not all parts of Montana will be suitable for wolf occupancy over the long term because of significant or chronic conflicts. It is not easy to predict where those areas will be. Social tolerance varies across space and time and from one landowner to the next. Similarly, the intermingled landownership patterns and land uses, in light of the ability of a wolf to travel long distances even in a single day, make it impractical to "zone" wolf distribution based on distinctions between public and private lands or certain land use or ownership patterns. Even these change through time. Nonetheless, the adaptive framework of the preferred alternative will help managers adjust management to local settings based on wolf numbers, land ownership patterns (primarily public lands and backcountry areas vs. mixed ownership areas), and social factors. This will be accomplished through program implementation at the FWP regional level.

FWP also points out that Montana cannot meet its commitment to the tri-state total by restricting wolf presence to wilderness areas and national parks. None of Montana's current wolf packs reside wholly in wilderness areas or national parks.

FWP is aware of the concerns expressed about wolves becoming established in eastern Montana or on the Charlie Russell National Wildlife Refuge. Likewise, FWP is aware of the concerns expressed by western Montanans that wolves could be distributed to the western third of the state disproportionate to total land area in Montana. Additional discussion has been added to the preferred alternative in the Final EIS to address these comments.

Representative Comments:

W329: Breeding pairs need to be dispersed throughout Montana – maybe dispersed by county.

W188: I'd like some kind of density threshold, where there would be a cap on so many wolves per unit area. If crossed that threshold, wolves would be subject to control of some kind. This is to maintain satisfactory ungulate levels.

W122: 1) #4 – the less wolves the better. Federal funding. 2) Wolves should be distributed east and west and not just in western Montana.

W209: Breeding pairs should be contained to National Parks. Stray wolves that cause problems, I.e. killing domestic animals. Landowner should have the right to shoot that individual.

W211: CMR should be included in the same rules as other lands in Montana.

W329: Maintain breeding pairs in Yellowstone, Bob Marshall, and other wilderness areas, rather than populated private land areas.

W731: I am very much in favor of restricting distribution to western Montana, and away from livestock producing areas.

W764: regardless of what plan is used, there needs to be good geographic distribution.

W772: I like the fact that there is no arbitrary boundary.

W794: They might as well be where they are not going to be a problem.

W1141: I think 15 pairs is adequate across the state. If you have wolves spread out throughout the sate, you have flexibility; more adaptive

W1167: Do not limit the distribution to western Montana.

W1174: I'm not for any artificial range limits or boundaries.

W1322: If all the breeding pairs/dens sites are located in GNP or YNP, would that meet federal requirements?

W1226: Wolves throughout the entire state would help share the load.

W1328: Must have an alternative for everyone. Agriculture community could live with alternative 2. But add in zones as in alternative #4. Manage migrating wolves more aggressively. Must de-list first.

W1375: Should take a close look at zoning wolves out of eastern Montana. This could reduce flexibility in western Montana.

W1380: Why aren't wolves distributed across the state? Alternatives focus wolves in the west of Montana.

W67: 1) Alternative #3, in my opinion, is the best alternative. There should be no artificial limits or boundaries. 2) there should be a compensation program in Alternative #2. Funding must be assured before the plan is finalized. It should be "clear" when citizens are permitted to kill wolves and only when there is dire threat to wildlife. We don't manage other wildlife with upper limits and habitat boundaries, we should not do so with wolves.

L0192: I am looking at Alt #2 with some amendments. No wolves would be allowed east of the Rocky Mountain Front. It would be devastating to the agriculture communities of central and eastern Montana. Livestock producers and economics of the recreation would suffer. Rumor has it that private lands will be closed to hunting if the wolf is allowed to establish in eastern Montana. Keep the numbers to a manageable amount of 10 breeding pair or less. Expense of federal dollars.

L0035: I am writing as a hunter, outdoorsman, and RMEF member who is in favor of wolf (and grizzly) reintroduction. The notion that 15 packs constitutes a "recovered" population is not scientifically sound. Wolf numbers do not presently reflect a viable, genetically diverse population nor do wolves occupy a large enough area to be considered out of danger of extinction in the lower 48. Until such time as wolves occupy more of their original territory in greater numbers, FWP should not adopt a management plan. No Action!

L0094: We realize that with all the alternatives you have ones to the far right and you have the ones on the far left. It is most difficult finding an alternative that hits the middle. We believe that Alternative #2 comes as close as any with the exception of a couple of amendments that we would like added. As noted in the Alternatives 3 and 4, 10 breeding pairs and 20 breeding pairs is the benchmark. Alternative 2 is 15 breeding pairs in which with

the maps provided, could be easily accomplished with where the wolves are located now. Although we have heard that your numbers are low as to what the actual numbers of wolves are in the Western part of the State. Fergus Counties #1 resource is agriculture with the revenue our businesses receive from hunting not far behind. We, as our constituents in Fergus County, are very adamant that we do not want wolves established in Fergus County, as are other Counties in Central and Eastern Montana. When we passed our Resolution, which I have enclosed, we did not have 1 person come forward and oppose it. We feel it would be detrimental to Fergus County's economy to let wolves establish here. Not only to our ranchers, but also to the businesses that rely on the thousands of hunters that visit our county each year. We have been told that if you allow wolves in Fergus County landowners will pull their acreages from the block management program. Landowners who allow hunting have said they will close their property to all hunting. This would be a devastating blow to the hunting opportunities and economy in Fergus County. We realize that it is critical that we get the wolf de-listed and feel you can do this under Alternative #2 with this exception: You establish a zone for the wolf population. Give landowners more flexibility in the Central and Eastern Zones. We have enclosed a map with our zone on it. We feel that you can obtain your goal of actively managing wolves West of the line we have drawn on the map. Wolves should not be allowed to establish themselves East of this line. A much more stringent management plan should be in place for breeding pairs that migrate. We would like to see the wording in Alternative #4, page 91, added to Alternative #2. Wolf distribution would be artificially zoned so that wolves would be trapped and relocated to Western Montana or removed from the population is suitable release sites could not be found. Wolf presence in Regions 4 and 5 should only be allowed in the areas on our map. The administration, de-listing language from Alternative #4 should be added to the Eastern Zone on our map for Alternative #2. We believe our Resolution # 6-2003 speaks for the constituents of Fergus County.

Resolution # 6-2003
A Resolution Expressing the Intent of the Board of Commissioners to Declare that Wolves are an Unacceptable Species.

WHEREAS, the health, safety, and livelihood of the citizens of Fergus County are the responsibility of the Fergus County Commissioners who are duly elected by the citizens of Montana; and WHEREAS, the three elected County Commissioners of Fergus County, do hereby condemn any effort, under the Endangered Species Act (ESA) or otherwise, which allows for the presence, introduction, or reintroduction of any animals, within the boundaries of Fergus County, which are deemed by the Fergus County Commissioners to be a threat to public health, safety, and livelihood; and NOW, THEREFORE, BE IT RESOLVED that the Board of County Commissioners, Fergus County, State of Montana, by the authority vested in us, do hereby prohibit the presence, introduction, or reintroduction of any animals which pose a threat to public health, safety, and livelihood within the boundaries of Fergus County, and shall take any and all actions necessary to protect its citizens. NOW, THEREFORE, BE IT FURTHER RESOLVED that the Board of County Commissioners, Fergus County, State of Montana, by the authority vested in us, do hereby prohibit the presence, introduction, or reintroduction of wolves within the boundaries of Fergus County. Passed and approved this 26th day of March, 2003

L0146: 1) Alternative 1. Twelve to fifteen breeding pairs statewide is a ridiculously small number for a state the size of Montana. The ranching industry is being given too much consideration – livestock losses – within limits are an acceptable price to pay for a healthy predator population, statewide. 2) As wolf populations increase and require controls, I advocate rifle hunting only. No trapping should be allowed. Bring wolves back to the Missouri Breaks in the new national monument.

L0285: Montana Outfitters and Guides Association: Regardless of the management plan that is ultimately selected. It is critical that wolves are delisted as quickly as possible. It is also critical that the plan is based upon the premise that preservation of our hunting heritage, through strict control of wolf predation on big game populations, to the extent allowed by law, has the highest priority to the Montana sportsmen and women, outfitters and landowners. It is tempting to say that MOGA's first choice for Montana's wolf management plan is Alternative 4, however there are important concerns associated with alt. 4. Alternative 4 appears to be driven by private landowner's low tolerance for wolves, tolerance that is certainly understandable. The problem arises when one considers the results of zoning and forcing wolves into public land, mostly in western Montana, rather than a more equitable, wider pattern of distribution. Alternative 4 may provide for trapping and hunting, but probably only in the beginning when the wolf populations need to be downsized quickly. Once the populations reach objective, trapping and hunting might become an occasional management tool, with strict quotas, rather than an ongoing one. Managing for a minimum of ten breeding pairs would be extremely expensive, as FWP would be forced to monitor wolves much more closely than with alternative 2. While wolf predation on big game populations would be minimized under alternative 4, the risk that Montana could fall below the population objective and return to a "listed" status is too important to ignore. After careful consideration, MOGA wishes to go on record as supporting Alternative 2 with some modifications. We believe that 15 breeding pairs is unnecessarily conservative. MOGA believes that 13 breeding pairs is sufficient and practical for the following reasons: 1) Three additional breeding pairs will provide a safety margin for FWP. The amount budgeted may not be sufficient. 2) Alternative 2 allows the wolf to be declared a big game animal for the purposes of trapping and hunting and the more conservative population objectives should result in a consistent trapping/hunting season. 3) Alternative 2 provides for a liberal cooperative relationship with private landowners. Alternative 5 should be considered a "default" position and not a first choice. Alternative 5 appears to mandate management by federal rules rather than Montana law - and provides no federal funding.

L0334: We are in favor of it coming off the endangered species and going to state authority. It is a devastating predator to our industries in eastern Montana - our livelihood involves chiefly cattle, sheep and horses. It is extremely hard to make ranching pay the bills now without fighting wolves. Also it will be a tremendous loss to hunting, as the wildlife numbers will really diminish with the wolf coming in. Probably most of the hunting areas will be closed off to hunting if this happens. It will most certainly affect the economy of the county because more and more ranches will have to go out of business. Keep them out of central and eastern Montana. West of the mountains is OK, but please keep them away from us.

L0081: 1) Alternative 1 because the breeding pair benchmark in the other alternatives is arbitrary. Minnesota maintains a wolf population of around 2600, with 79,617 square miles of land base. This makes the average density of wolves in MN about 1 wolf per 10-15 square miles. Montana on the other hand has 145,556 square miles of land base. 2) Limiting wolves to 15 packs per 150 wolves, means a wolf density of about 1 wolf per 725 square miles. Base the number of wolves in the state on available and sustainable habitat, not random population number.

E87 1. The no action alternative would keep wolves on the endangered species list where they belong. According to the Endangered Species plan species must regain a significant amount of their native territories to be considered recovered. Wolves exist in less than 10% of their native territories. 10% is not significant. Scientific studies must be conducted to determine at what percentage of distribution would be considered significant. These studies have not been conducted. 2. nothing:

Social

Summary of Comments: These comments reflect the differing philosophical, value-based opinions, and the human dimensions surrounding wolves, wolf management, prey populations, etc. The social, cultural, and aesthetic values people assign to the gray wolf today grow out of a long, colorful history of interactions between wolves and people. Public opinions about wolves and their management vary greatly. FWP received public comments reflecting the full spectrum. Due to the difficulty in characterizing and summarizing this group of comments, the reader is encouraged to review them below.

Response: A successful conservation and management program for wolves ultimately depends on people and their attitudes. The social factors that shape public interest in or tolerance for wolf presence and how conflicts are resolved are equally important components of any wolf management program. FWP's preferred alternative, based on the work of a stakeholder group, seeks to find common ground between wolf advocates and those most directly affected by wolf presence. A compensation program is one component that will address economic losses experienced by livestock producers due to wolf depredation. While a compensation program may not address or financially mitigate all the costs and challenges of wolf restoration within landscapes that include livestock, it does increase awareness of those challenges and stimulate discussion about how to address them more comprehensively.

In addition, the underlying philosophy of the preferred alternative is one of balance and recognition of the wolf as a native species. FWP will seek to integrate and sustain a wolf population in suitable habitats within the complex biological, social, economic, and political landscape of Montana. While that may not be an acceptable outcome to all citizens, wolves in Montana are here to stay. FWP and the Council believe it is in Montana's best interest to move forward with a state-based management program.

FWP anticipates that the public will readily identify real or perceived problems or shortcomings of the program. The challenge for FWP will be to discern between earnest differences of opinion in preferred management direction and substantive shortcomings of the program. Difficult decisions will have to be made and will sometimes be called into question by various interests. The public is invited to continue participating with development and implementation of the wolf program.

FWP did receive several comments about whether FWP adequately recognized the authority or jurisdiction of tribes and the potential impacts of state actions in Indian tribes' cultural and spiritual relationship with wolves. FWP has considered and fully recognizes the authority of Indian tribes to manage wildlife within reservation boundaries. FWP did not assess the impacts or effects of its preferred alternative on reservation wildlife or cultural aspects of Montana's Indian tribes or reservations. Montana does not have jurisdiction for wolf management on reservations, yet remains respectful of the cultural wildlife traditions of the tribes. FWP does welcome partnerships with tribal authorities to manage wildlife populations of mutual interest and potentially overlapping jurisdiction in the case of packs that move on and off reservations.

Representative Comments:

W7: This issue is going to be difficult to keep everyone happy.

W20: Let's put wolves back into eastern part of the U.S., not just out here in the west.

W66: The longer you do nothing the more difficult it will be to balance the approach.

W95: Go middle of the road to help manage problem areas.

W215: FWP should adopt a zero-tolerance for wolves because of impact to deer/elk and financial impact to department and state.

W227: A lot of environmental groups would like to get domestic livestock off public ground and wolves are just a tool to achieve that.

W239: It took 100 years to get rid of wolves; now we want to bring them back?

W247: Should be 6 alternatives – no wolves at all.

W260: Livestock producers ultimately pay for wolves.

W381: Rest of the population in the country want wolves here. They can pay for it.

W455: We can make it work if we work together.

W23: 2. More education to the general public on researching alternative ways of raising livestock in order to decrease the losses. I want to see more science – are the benchmark ##s ecologically viable?

W469: Not even close to being extinct – they are not needed or wanted here.

W494: In concept, ESA law may be appropriate, but should not be a back door approach. This is not just a wolf ecosystem – there are people, wildlife and livestock.

W519: Will never be able to develop a compensation program that fully compensates the landowner for livestock loss.

W600: This is a new predator here, and everyone needs to learn how to deal with it.

W604: I think if the state takes over and people don't complain too much and work together and don't get bent out of shape, we can make this happen.

W619: Pro-wolfers also suffering a loss, ethical emotional loss when a wolf is destroyed.

W621: Rancher suffers emotional loss – it's not just the money.
W654: Most ranchers already learned to live with difficulty and can rise to the occasion, make the adjustment. The adjustment is to sell.

W740: There needs to be a healthy balance.

W807: I don't like to kill wolves. I don't like to take care of other people's problems - I'd rather that they aren't out there.

W831: Why is FWP stuck with this plan when they already have enough to do?

W854: If you live in an area next to someone who tolerates lots of wolves, you're going to have problems.

W890: Feel that public comment on EIS had no effect on what was printed last year.

WW954: I want wolves; I want them to be managed to interface in a humane way.

W1019: Protect Montana lifestyle of hunting.

W1046: All pro wolf people are not anti-hunting.

W1086: Don't listen to nonresidents. You work for the residents of Montana.

W1112: I hope that this wolf management program does not become a burden on the people of Montana. It should be federally funded.

W1147: Let people care for their own problems. We will never be out of wolves; people are knowledgeable enough to take care of their own problems.

W1192: I am concerned about public image of hunters if wolves are shot.

W1195: Hunting … Montana is wilder; I like to hike in grizzly country; same for hunting – seeing wolf tracks made my hunting trip. No mention in EIS relative to how the hunting experience is enhanced by wolf presence.

W1224: Not really in favor of wolf management, but alternative #2 is probably the best/safest way to go.

W1229: Compensation should be for ranchers but also loss to sportsmen should be considered and compensated for as it was sportsmen dollars that brought back the prey species.

W1331: Ranchers and wildlife add to the quality of Montana life. I like alternative #2 – it's the most fair.

W1344: Man is a predator of no less importance than wolf and lion. We are predators. Important to state that. Hunter is as important in the food chain as lion, wolf and bear.

W1409: Wolves are just an excuse to end hunting.

W1411: Our Fish and Game Department is against the sportsman for wanting and supporting wolves and wolf management.

W1425: Trying to make things like they were 100-200 years ago and it can't be done – too much has changed.

W1443: Managers need to have flexibility to have protections from political influence.

W1473: I do not understand how you are going to manage them.

W7: 1. Don't put any money into wolf programs, if such money is needed elsewhere. IF ANYTHING BE UNESSENTIAL, IT IS WOLVES. 2. Shut off all money to the wolves and their protection until abundant proof is shown of lots of human benefits to have from having these predators in our environment.

W17: Alternative #2 is our choice. Although this alternative is not perfect, what is? We believe this alternative allows ample flexibility for the State of Montana, names the Department of Fish, Wildlife & Parks to take on the responsibility of managing these magnificent creatures.

W49: 1. Reluctantly, the Valley County Resource Use Planning Committee would have to select Alternative Plan 4 as the least damaging. 2. Congress in the Federal Land Policy and Management Act, 43 USC Section 1712, has required the Secretary of the Interior to include local government officials in the federal land use planning process.

By this process, the Valley County Resource Use Committee is charged with the responsibility of developing plans and making recommendations to the Valley County Board of Commissioners on issues relating to the use of the federal lands and impact which that use has on private lands and the economic and social structure of the county.

This committee is in total agreement with the Valley County Board of Commissioners and it is the firm belief of this Committee that the wolf, by definition, is a predator and should be assigned the status of predator and managed according to that status.

Historically, wolves have been proven to be detrimental to the health, safety and livelihood of the county citizens, therefore, the presence of wolves is not desirable.

In addition, if costs of administering a federally mandated management program are wrongly imposed on state and county governments, taxpaying citizens will be expected to carry an unfair burden of sacrificing repeatedly for a program that is supposedly for the public good.

The Valley County Resource Use Planning Committee is disappointed that there is no alternative plan presented that is consistent with the goals and objectives of this Committee and Board of Commissioners.

Reluctantly, the Valley County Resource Use Planning Committee would have to select Alternative Plan 4 as the least damaging.

We would like to request all involved agencies ensure that policies are in accordance with statutes and can also produce data and timely information in conformance with the data Quality Act, Section 515.

The Valley County Resource Use Planning Committee respectfully submits this documentation to be a matter of public record.

W41: 1. Need to have wide flexibility to control wolf. Given the Yellowstone sanctuary, there will never be a threat to wolves as a species. This must be taken into consideration as one considers requirements for maintaining a wolf population. 2. Outfitting and ranching are big contributors to the economy of Mt. Wolves are largely, a dream or, at best unsubstantiated or immeasurable benefactors. If ranchers and outfitters can not make a living, then you will only see more development and subdivision

W55: 1) None. The local people do not want wolves here. The federal government spent millions to get rid of them. If people want wolves put them in the city, not here. 2) Eliminate them now!

W60: 1) The world is changing and meat eating and the meat industry is going to be greatly downsized. Perhaps the meat-raising farmers will be forced to grow organic vegetables instead, and then the wild life won't be the problem they are now. I would like to see this happen. I say get rid of the cows and sheep farming in the areas near the natural predators and that's not going to happen anytime soon with the way people think, but the world is changing. 2)I'm for #1 or #2.

L0037: USFWS has spent millions to establish these wolves in Montana, and now that the wolf population is multiplying rapidly, they want to dump this mess on Montana. FWP proposes to accept this responsibility and this should be refused for the following reasons: 1) Money. Montana does not have $800,000.00 a year to spend on wolf management, and it certainly won't have the ever-increasing money needed as these wolves increase. Managing these wolves is not a Montana responsibility - it's a Federal responsibility. Until Congress passes laws providing money to fully fund that responsibility, all further planning is a waste of time. 2. Publicity. USFWS apparently killed at least a half dozen cattle-killing wolves in the last 12 months in Montana. Every year far into the future, more wolves have to be killed every year because they're attacking livestock.

Our State spends a fortune every year trying to encourage tourism. What is the possible logic of allowing those advertisements to be offset by TV pictures of Montana officials "murdering" the wolves? 3) Wolves will decimate our big game. Big game hunting is Montana is a major economic and pleasure activity, both for locals and for out-of-staters. These ever increasing packs of wolves are going to decimate our deer, elk and moose, and our hunting economy will evaporate. 4 Let the USFWS keep the wolf problem. USFWS wants to give Montana control, but USFWS expects to continue to tell Montana how many breeding pairs we must maintain; when and under what circumstances Montana can allow a wolf to be shot, etc. If Montana takes over wolf management under any USFWS approved plan, USFWS will continue as the great father, disciplining Montana if any facet of our wolf management doesn't meet great father's requirements. Wolves so far the USFWS problem and the wolves are rapidly multiplying and the problem is rapidly getting worse. Why should the State of Montana assume this problem? Why shouldn't this continue to be a USFWS problem and why shouldn't Montana make every effort to require USFWS to protect Montana's citizens from the depredations and losses these wolves are going to cause us as these wolves rapidly proliferate?

L0126: 1) Let us get rid of all the wolves in Montana and if people want to see wolves they can go to Canada where there are a lot of them it will save us many millions of dollars. This looks like some bureaucratic waste of money for nothing.

L0025: Who needs the wolf? This is a worthless program. I do not want any of my tax dollars wasted on the wolf program. We have more wolves than we need now. If you want to see a wolf, go to Bear Country in South Dakota.

L0041: I find it truly appalling and inhumane that $800,000 is taken away from families with little food, little means of keeping warm, elderly buying medicine, education of our children and a growing tax bill for the average American to support 183 wolves. Where the hell is the FWP's sense of

balance concerning humans and predators. You simply have "NO SHAME". Our forefathers had the wisdom to kill these predators out. Now our own government had betrayed the backbone of America- it's farmers and ranchers. Do you know where the food on your table came from? Do you care whose tax dollars you are poking down a rat hole?

L0272: We have never seen a wolf so why do we need them? Grandfather told of wolf packs chasing teams and wagons with families running for their lives. If you want to see a wolf, put them in a locked-up zoo or park.

L0044: In keeping with the importance of Montana's heritage, the state should invest in the Updated Council Alternative, which satisfies both the concern for ranchers and those concerned with wolf recovery. By keeping the wolf on the ESA, Montanan's are further relinquishing their ability to control wolves, by keeping wolf management in the hands of the federal government while hindering other species chances of recovering. If wolves are kept on the ESA 29 other species will continue to wait to be listed until enough funding is available. The funding of wolves under the ESA could be used for those other species, once the gray wolf is de-listed. Therefore, wolves need to be de-listed, and managed properly through the Updated Council Alternative. In choosing this alternative, several sides will be satisfied. Because Updated Council allows more flexibility in wolf management, ranchers could kill wolves "threatening to" or in the act of killing livestock. Yet, the regulations regarding wolf management would also insure that wolf numbers are bountiful and healthy, placating the wildlife conservatives. The flexibility of the program also allows revenue to be raised for the state of Montana. Under MFWP's management, when wolves are de-listed a hunting season could be established. This would provide additional funding for wildlife management because as is big game hunting, those wishing to attain a permit would have to purchase a license. It also could bring money in to the state with the sale of out of state licenses.

L0043: I am in favor of leaving wolf management to the U.S. Fish and Wildlife Service to be protected by the Endangered Species Act. I don't think wolves should be hunted under any circumstances. They are important predators that help keep other populations of wild animals healthy. I don't think the loss of a few domestic animals justifies killing wolves. Please select the alternative in the Wolf Plan EIS that reflects these views.

L0056: I urge you to assure the state funding as your first step in this process. Then please clarify the specifics for wolf kills-- only when wolves pose an immediate threat to livestock. As you know that policy has worked in every other state where it has been tried and predation has not been a problem, despite worries about it. Montana has the healthy environment to support a minimum number of breeding pairs of wolves--specifically as outlined in Alternative 3 of you draft EIS. This is of course critical to long term survival. And because you enjoy the wonderful gift of a healthy environment the wolves should be managed as other wildlife it, and with no artificial limits on wolf boundaries or numbers. Montana and its citizens can act with a view for the long term, with respect for all the wildlife and open lands that so many of your fellow Americans no longer enjoy. It is a heritage that deserves real appreciation and real planning in order to protect your land and animals for those who come after us.

L0091: I am in favor of NONE of the Alternatives offered in the Draft EIS, as each of them is unsatisfactory in one way or another. One basic problem is that wolves have been inflicted upon the population without significant substantiation of need, reasonable rationale or purpose, and without consent and approval of the people. It is perfectly obvious that this species is in no way in danger of extermination when, as someone stated last night, the state of Alaska sees fit to offer five wolf hunting permits per hunter. We, here in the Flathead, know from sad experience in the past that mistakes can be made by various governmental agencies in the management of our wildlife and environment. Now, what assurance do we have that, in the very near future, the FW&P will shrug their shoulders over the outcome of the wolf program, and simply admit that, of well, maybe this has been a mistake…not such a good idea? Ravenous wolf packs are proliferation at a rapid rate and devouring our game animals. Beleaguered ranchers are struggling to survive on a very narrow profit margin. The loss of a calf in a cow/calf operation by rights should be reimbursed at the price of a full-grown animal because that was the anticipated sale value of this animal. Calves growing to maturity are the end product of this business and that investment and potential has been lost. Then in addition to the financial loss, this busy rancher customarily working 12 or more hours a day, had the added burden of repeatedly completing government forms, meeting with FW&P officials and trying to prove that the loss of each calf and/or cow is, in fact, due to wolf kill. The ongoing concern and harassment and futility of it all is causing ranchers to give up the life and livelihood that they love and put that ranch up for sale. It is all lost through on-going worry and concerns over wolves and the intrusions of federal or state agencies into his life and sense of security. One cannot help but wonder if, somewhere in this program this might possibly be the true objective and strategy to achieve an unpublicized agenda. The provision or non-provision of compensation is one of the variables within the four alternatives. It is an open-ended statement. Implied is the compensation for livestock loss, but how does an agency measure and compensate for a beloved dog, a child's pony, or the child itself? There is no compensation for finally giving up and selling out the ranch, or going hunting and coming home empty handed. There are endless studies and reports on the wolf monitoring and counting them, collaring, tracking, etc.etc. which assures extensive increased in staffing and personnel at taxpayer expense. This is to say nothing of cost of lawsuits by the environmental community who are never quite satisfied with how much is being done for the wolf. People's lives are changing drastically due to over-bearing, oppressive rules, regulations and restrictions inflicted upon them. Those who know the wolf can for-see increasingly devastating impacts with its proliferation and expanded territories. We have here a proposed wolf program which we are being asked to agree to with just too many open-ended, totally un-measurable variables. Also we are told that the problem wolves that take a liking to cattle can be managed. That is the FW&P term for KILL. Let's face it, ALL WOLVES are problem wolves since ALL wolves love and eat anything that moves, including cattle. It is just not fair to limit wolves to the sparsely populated rural, where so few people can enjoy them. Perhaps Montana FW&P was surprised at the relatively low attendance at this public comment meeting as compared to the first one held many months ago. I think we can see here a sense of disparity, futility, and impending doom. The absentees from this meeting did not stay away out of lack of interest and concern. They know the nature of wolves and results, in other regions, of their over-population. They can for-see how quickly this entire venture can get completely out of hand; out of control. Perhaps they are resigned. I hope not. We must warn and inform those who are unaware and uninformed of the dangers in this wolf program.

L0125: We would like to comment on Montana's Wolf Conservation and Management Plan. The title of the plan implies that wolves are to be maintained in the state of Montana and not allowed to become endangered again but it seems that several counties have already voted wolves to be "unacceptable" in their counties. We have a lot of fear that if wolf management is turned over to the states, wolves will soon be eradicated as they have been in the past. We would like to see wolf populations protected and even increased beyond current levels in order to ensure a truly viable population now and in the future. Our first preference in Alternative 1. If management must be turned over to the state, then Alternative 3 which calls for additional wolves would be our next choice. We believe that the presence of wolves in our state enhances the quality of life her and is a vital part of what makes this a wonderful place to live. A place where all creatures great and small are valued.

L0137: 1) Since when was it rational (ever) to put animals before human beings? 2) The livelihood of the rancher and farmer far surpasses the re-establishment of wolves any day! 3) It took many years to remove/clean out the wolves in Montana (due to their destructive ways)! Call it what you will but big money was lost by ranchers and farmers! Why would anyone in there right mind want the wolf back? 4) Any/all plans to re-introduce wolves is insane- period!! 5) Those people who want wolves back in Montana other states (to do their damage) again must live in a fog! Wolves cannot be contained to certain areas- they roam!!! 6) The only sound plan is to remove wolves from farm and ranch areas- they come first (ranchers/farmer) wolves should be gone, gone, gone!!!

L0140: 1)Alternative 1. Twelve to fifteen breeding pairs statewide is a ridiculously small number for a state the size of Montana. The ranching industry is being given too much consideration - livestock losses - within limits are an acceptable price to pay for a healthy predator population, statewide. 2)As wolf populations increase and require controls, I advocate rifle hunting only. No trapping should be allowed. Bring wolves back to the Missouri Breaks in the new National movement.

L0188: My selection of the 5 alternatives is Alt. #1. The removal of federal protection for the gray wolf is premature at this time. In Montana there is significant hostility and fear directed at this species. The local governments of Phillips and Fergus counties have stated that "wolves constitute a menace to society that cannot be tolerated. Dan Fuchs sponsored house bill 283. If this is an example of what the wolves will have to deal with in their struggle to survive it appears that FWP hasn't done the necessary public outreach to assure that when the wolves are delisted they aren't slaughtered and have to be re-listed again. FWP revenue is directly linked to sale of hunting licenses. Since wolf recovery depends on prey species, FWP would be pressured by hunting interest to aggressively manage the wolf population. I don't believe that the state of Montana would actually manage the wolf program at the high range. The livestock industry and hunting interests would never allow that. Since FWP would meet their legal requirements with the low end range, that's what could be expected. The state run wolf management program would undermine and reverse the gains that the wolves have made under federal protection. While I think that the state of Montana should be permitted to manage the gray wolf along with other wildlife species, the draft EIS suggest that they cannot be trusted with that responsibility at this time. Even FWP's preferred alt. 2 relies too mush on micro-managing wolves when prey populations drop. Therefore, this delisting process presents a conflict of interest for FWP. To have a more balanced approach to wolf management. FWP could implement revenue raising programs other than selling hunting license. I don't believe that public attitudes have changed that much regarding wolves. They have been brought back into an environment where most people don't know how to live with them. In order for people to accept wolves, their fear and hatred has to give way to more tolerance. Public outreach programs and services might bring that about. But once again, these changes need to occur before wolves are delisted and managed by FWP.

L0226: I believe your job is the encourage the growth of big game species of MT. Not predator species and obtain research grants at taxpayers money for your own personal job security.

L0240: Montana is a State that has great diversity in its mountains and plains, its lakes and rivers, its forests and prairies and its wildlife species. The Plan by the Montana Department of Fish, Wildlife and Parks (FWP) to conserve and manage gray wolves that are now at population levels considered adequate to remove them from their protected status under the Threatened and Endangered Species Act represents an opportunity for Montana to incorporate the management of wolves into the comprehensive program of wildlife management that includes the major predator and prey species in Montana. The Montana Wildlife Federation (MWF) has followed closely the recovery of wolf populations in Montana and has provided comment and suggestions relative to the development of a management approach by the Montana Wolf Management Advisory Council and in the development of strategies and alternatives for a management plan by Montana Fish, Wildlife and Parks.

MWF fully supports FWP in their recognition of the gray wolf as a native species of Montana and is in agreement that wolf restoration is consistent with Montana's history of wildlife conservation. MWF also fully supports FWP in their commitment to manage the recovered wolf populations in accordance with Montana's laws, policies, rules and regulations. We believe that the Montana Wolf Management Advisory Council developed a very responsible approach to addressing the issues of wolf management relative to both wildlife and livestock interests in Montana. The Council also could vision a need for and developed a framework to address the issues of human safety and protection of private property in their wolf management approach. We believe that management of the recovered wolf populations under State adopted guidelines will provide a more flexible, adaptable and responsive program that considers the various interests and needs of Montanans. We believe that only under State management can measures be implemented to control wolf populations and wolf distribution to address concerns for livestock interests and operations. We believe that only under State management can concerns for deer, elk and other prey populations be given appropriate consideration while maintaining recovered wolf populations in Montana.

MWF supports FWP in the concept of managing recovered wolf populations at a level somewhat above the minimum population of 10 packs in Montana that represents the threshold for possible re-listing under the Endangered Species Act. We believe this is essential to providing the flexibility of management that will be needed to address issues and concerns relative to wolves in Montana. We believe that wolf management should be an active program that can balance the concerns for both predator and prey populations and that a fully funded monitoring program is an integral part of the management effort. We believe that recovered wolf populations should be distributed widely within the recovery area to enhance stability in wolf populations and in prey populations. We believe that management tools and pro-active measures should be implemented to minimize livestock depredations throughout the wolf management area.

MWF believes the efforts of the Montana Wolf Management Advisory Council and Montana Fish, Wildlife and Parks can result in a balanced management approach that integrates wolves into the realm of native wildlife that is considered by Montanans as their wildlife heritage. We applaud FWP for accepting the challenges and responsibilities of managing a recovered wolf population in Montana.

L0242: I am writing to ask that the wolves in Montana NOT be harmed, trapped, snared or hunted. I ask that the wolves in Montana NOT be removed from the Endangered Species Act. I ask that the wolves in Montana be protected. This is crucial. All animals are God's creatures. All animals have both physical and emotional feelings. Animals can feel pain, stress and fear. Your help is greatly needed - now. Please help to save and protect God's creatures and the environment. Laws, rules and regulations should become stronger and be more strictly enforced to better help save and protect all animals and the environment everywhere. Soon. Funding of the state program should be assured before the plan is finalized. Provisions for when citizens are allowed to kill wolves should be clear and specific, permitted only when wolves pose an immediate threat to livestock or people. The minimum number of breeding pairs should be at least 20, as outlined in Alternative 3 of the draft plan, to assure long term survival. Wolves should be managed like other wildlife, such elk, bears and mountain lions, with NO artificial limits on wolf numbers or boundaries.

If the wolves begin to over populate, there should be a sterilization used or created in an edible bait type form. Many wildlife become a "problem" due to weather, sprawl, polluters, loggers, development, etc...Sad. Thank you for taking the time to read this letter on this very important issue. I hope that you do receive this letter and in time. Thank you!

L0251: The Humane Society of the US does not consider the gray wolf to be fully recovered in the northern Rockies region, much less the western DPS as a whole, primarily due to relatively small, isolated populations in this area and insufficient integration into the ecosystem. The attitudes of some citizens in this area continue to be very negative toward wolves. We are concerned that these negative attitudes will continue to pose a threat to the long-term survival of the gray wolf in this area. At minimum, these attitudes could result in a heavy reliance on lethal control to address wolf-livestock conflicts as well as pressure on the state wildlife agencies to allow hunting and trapping of wolves, once federal protections are removed. We suggest that when MFWP does assume responsibility for wolf management, it must do so with the understanding that it is maintaining this species in trust for the nation.

Although the preferred alternative (or the additional wolf alternative) may provide some protective measures, we are concerned that these measures may not go far enough to ensure the long-term viability of the wolf. Long term survival of the population will require not simply a particular number of individuals in the population, but enough reproductive adults to account for loss of genetic variability due to chance processes over time, as well as variation potentially lost as a result of disease or weather-related events. While we are not satisfied with the USFWS definition of a pack is sufficient to ensure long term viability (and ecological foundation), the much loose definition of a pack suggested in the DEIS would be absolutely unjustified and could jeopardize the long-term survival. Mistakenly classifying such a group as a breeding pair, with the assumption that it includes a breeding pair, could jeopardize the survival of the wolf population in Montana. This would be especially problematic if such a classification leads managers to allow for increased hunting and trapping or more liberal methods for dealing with wolf-livestock conflicts. We urge MFWP to adopt a definition of a wolf pack that is more rigorous and biologically relevant than the current USFWS definition. This definition should be retained even after the five year intensive monitoring period. We especially urge MFWP not to revert to an even looser, less biologically appropriate definition of social group.

We also do not see any justification for using a particular number of breeding pairs as a trigger for changes in management decisions. Human-wolf conflicts will not necessarily be reduced by reducing wolf population size via recreational harvest or through more liberal predator control. Attempts to reduce the wolf population (through hunting and trapping) to the extent necessary to actually produce a reduction in conflicts will likely put the wolf population once again at severe risk of extirpation. We suggest total MFWP and cooperating agencies rely on public education and assistance with non-lethal means of preventing or reducing conflicts with wolves. Conflicts between wolves and humans can be effectively addressed through non-lethal means (increase wolves' wariness through the use of frightening devices or by killing only the problem wolves. Increasing overall wolf mortality hen the state counts breeding pairs may have unintended consequences as well, such as destabilizing pack social structure and territory defense, or increasing the number of dispersing immature wolves. We are concerned that establishing a trigger in terms of the number of breeding pairs, through not intended by MFWP as a population "cap" may essentially function as such. It may inadvertently send a message to the public that only so many wolves can be tolerated, no matter how well the public prepares themselves to prevent any potential problems with wolves. At worse, the management trigger could make it difficult for the gray wolf to truly establish itself and for balance to be restored to the ecosystem. Data from other states indicate that an increase in a wildlife population does not necessarily correlate with an increase in complaints or conflicts associated with that species. We urge MFWP to abandon the use of a particular number of packs as a trigger for changes in management. Instead, MFWP should retain conservative management of wolves (i.e. only minimal human-caused mortality via conflict control activities allowed and no hunting/trapping) regardless of the number of breeding pairs or packs. Wolf recovery depends vitally upon the availability of suitable habitat -- for wolves, large well-distributed refuges are important to maintain sufficient genetic variability. The DIES acknowledges the importance of dispersal, but indicates that no corridors are planned specifically. Therefore the ability of wolves to disperse will absolutely depend upon tolerance by humans, especially if MFWP does not plan to cooperate with other agencies to restrict grazing leases in areas with a high potential for wolf-livestock conflict. We suggest that the importance of dispersal constitutes an important reason not to allow recreational hunting and trapping for wolves now or in the future. We are concerned that hunting/trapping for the wolf may be established or liberalized in the future for the sake of ensuring continued hunting opportunity for hunters interested in hunting elk and other ungulates. Allowing recreational killing wolf wolves or of predators for this purpose is simply unnecessary and unjustified. If necessary, the number of elk killed by human hunters may have to be reduced. We are also concerned that declines in elk hunter success in the absence of actual elk population declines may be used as justification to allow or increase the recreational killing of wolves. From an animal welfare perspective, designated the wolf as a game animal or furbearer sometime in the future would allow for hunting and trapping methods that many members of the public consider to be inhume for any animal, including the wolf. HSUS is opposed to the use by the public or by Wildlife Services of leg-hold traps, neck snares, let snares, or other trapping methods that have the potential to result in prolonged suffering and injury.

HSUS recognizes the important of helping livestock producers to safeguard their livestock and to coexist safely with wild predators. However, the goal of reducing livestock depredations does not require the use of liberal lethal wolf control, even when wolf population size is perceived to be large in the area. The use of livestock guarding animals and other non lethal measures should be combined with livestock husbandry improvements in fencing, prompt removal of carcasses, and providing greater protection and supervision of the vulnerable old and very young cattle and sheep. When depredations occur in spite of responsible husbandry and other nonlethal preventative techniques, aversive conditioning and the use of frightening devices can be employed to alter the behavior or depredating wolves. However private citizens engaging in these techniques for the protection of livestock or other property should be properly trained so that they are used effectively and do not cause unnecessary injury or suffering. Widespread nontargeted lethal control or unrestricted hunting/trapping is at best not necessary for the protection of livestock. We are concerned that the DEIS provides only limited information on the nature of the assistance that MFWP or WS will provide producers regarding livestock husbandry improvements and nonlethal predator control methods. HSUS urges MFWP to give greater consideration in the final EIS to nonlethal control methods and use lethal only when all feasible nonlethal control and prevention methods have been exhausted, regardless of the number of breeding pairs. If lethal control is unavoidable, wildlife management professionals are best suited to this task and are more likely than private citizens to target the appropriate individual and to effectively minimize pain and suffering. WE ask MFWP to provide more detail in the final EIS on types of assistance -- such as workshops, onsite demos, information on how to purchase and train livestock guarding animals. We also urge MFWP to specify that any lethal control, conducted for the sake of protecting livestock is only conducted when a depredation has been verified and only after all feasible nonlethal techniques have been attempted. HSUS is strongly opposed to the use of chemical toxicants (including sodium cyanide, sodium flouroacetate) restraining traps, kill traps, denning, aerial gunning and other methods that may result in prolonged suffering. We are particular opposed to "preventative" lethal wolf control in which wolves would be killed in the absence of verified wolf depredations. It is unreasonable for livestock producers to expect all risk of predation to be removed=moved. This goal could only be reached by killing 4every wild predator. HSUS agrees that the affected livestock producer should be eligible for compensation at fair market value. We agree that this is an important way to maintain residents tolerance for wolves, at least until more efficient means of nonlethal reduction to risk is more widely used. We urge MFWP to at least establish a

temporary wolf depredation compensation fund using state money. Such a fund could expire on a previously determined date under the assumption that other sources of funding will be found in the meantime. This would reassure the public that the state is prepared to take on the responsibility of managing wolves after delisting. We urge MFWP to provide more concrete details on the potential funding for an incentive program and/or proactive program. We appreciate the clarification that a wolf must be "attacking or killing" a domestic dog before a person could legally kill the wolf. However, we are concerned that this distinction between a threat and an actual attack may be difficult to enforce. While we certainly do not want to see dogs killed by wolves or other wildlife, and would understand the desire to attempt to save a dog, owners must be encouraged to take some personal responsibility for the safety of their pets. We understand that the long-term persistence depends on carefully balancing the complex biological social economic, political aspects of wolf manage. But we are concerned that a small number of especially vocal members of special interest groups are dominating the "human dimensions" aspects of wolf management strategies in this state. We agree that legitimate concerns about wolf depredation on livestock and the associated economic losses must be addressed. However, an outright opposition to predators by some individuals in Montana has been driven primarily by unwarranted fears and exaggerated claims about the effects of wolves on livestock, human safety, and other wildlife populations. These unfounded claims should not be used to justify recreational hunting or trapping, or liberal lethal wolf control for the sake of protected livestock without first attempting all feasible nonlethal methods.

L0263: I would like to see a population of wolves maintained in Montana. I thoroughly enjoy seeing and hearing the wolves in the Sun River drainage. I like the fact that they wandered in on their own. It means more to me to hear and see the North Fork Sun River wolves than those in the overly managed Yellowstone ecosystem. I also enjoy hunting elk and observing elk. I realize the importance of maintaining elk herds in Montana for the money hunting brings to the state but I do think wolves and elk can coexist. What might have caused the decline in elk numbers? Could the elk's movement patterns have changed due to the presence of wolves?

L0301: We do not want or need any wolves introduced in out county, Petroleum. Please list the wolf as a predator which it is. The Fish and Game have enough trouble trying to manage wildlife in our county. They are understaffed and overworked. Please do not put any more on them or us as citizens in this county.

L0314: I am in support of the wolf reintroduction program as well as wolf management in the state of Montana. I would like to see this handled scientifically and not ruled by emotions. It is our job to do the best that we can with keeping the wolf as one of our state treasures. I also think that an advisory board needs to be set-up of ranchers, hunters, citizens, government agencies, animal environmentalists and etc. to advice. If cows, dogs and farm animals can be compensated then I believe that our state treasures, deer, elk, moose, wolves, cougar and etc. can also have a high rate applied to them and when they are poached then that rate along with any other fines would be given to the poacher to pay. This flat rate would then be put back into FWP funds for protecting our out of doors as well as compensation for when a farm animal is taken by a wolf. Rule this rationally, legally and scientifically. Let us all benefit by keeping wolves in our state and set an example for other states to follow. Keep wolves in Montana.

L0325: Wolves should be given the greatest protection possible and populations allowed to grow until they reach a natural carrying capacity for the state and region. Wolves should not be hunted due to the disruption this will cause to each pack's social structure. MTFWP states that wolves should be managed just like mountain lions and black bears. However, this is not what you are proposing. It appears that you are not going to let wolves grow in population size until they reach an equilibrium with their environment, which is what lions and bears are being allowed to do throughout the state. Instead you are proposing to keep a minimum of 15 breeding pairs. This is inappropriate. What you mean by managing wolves like bears and lions is that they can be shot and killed. In order for wolves to be managed like other big game in the state they must be allowed to grow to a natural carrying capacity and then strictly regulated to ensure continued population growth. Whether or not wolves affect big game populations they should be encouraged to expand their range into all habitats of Montana. Wolves and other predators are important and vital components to functioning ecosystems. Hunters fear that wolves will cause big game numbers to decline, but this is exactly what many people around the state and MTFWP are managing for, so wolves should be greatly welcomed to expand and potentially reduce big game numbers. There is great opposition to wolves in this state form many citizens, but there is also great acceptance and understanding for wolves by many people in Montana and around the USA. But just because the power is shifted to the states does not mean that you have to bow to the irrational wishes of many vocal opponents of wolves. MTFWP should manage wolves so that they can flourish in number and once again hold their title as a top predator throughout the state where they number into the thousands and contribute migrating individuals across our borders.

L0337: I live on a family ranch in Petroleum County. I feel if wolves were allowed in this area it would have a devastating effect on my family and the rest of the people in this area. There is an abundance of wildlife and wolves would create uncontrolled havoc in the wildlife numbers. Agriculture is the main source of income. The loss of livestock would make tremendous hardship on the people of this area. The loss of wildlife would also be a hardship on many people. I do not think wolves should be allowed in this area. I do not support any amendment that allows wolves.

L0349: 1) Leave the wolves alone. You can see cows in Kansas. 2) Leave the wolves alone. You can see cows and sheep in Illinois.

L0352: 1) None of the alternatives are acceptable, #4 would be the minimum. The least wolves the better. They are decimating our wildlife in record numbers. They weren't endangered in the 1st place. It was just a make more government jobs. Why don't you represent the hunter and fisherman who pay over 62% with their license fees? If there were too many elk in the park why not transplant them to other areas, like the Flathead and Bob Marshall? You would've been backed 100% - but no - you didn't stand up for our rights just your jobs! 2) Pay compensation to rancher, full market value for the size of animal would have sold for when grown. Make the wolf lover pay the bill. Maintain a hunting/trapping season. Keep the feds out and do your own management. But Feds should pay most of the costs - it was their program to start with and crammed down our throats. Please stand up for our wildlife and the people who are paying your salaries. Show some guts and tell them to take the wolves back east someplace if they love them so much and kill out their wildlife.

L0354: 1) Alternative #4 minimum wolf is best. Why? 1-less wolf-livestock conflict. 2-less wolf-human conflict. 3-federally funded versus sportsman's dollars. 4-decreased predation of big game herds ensuring stable big game license sales. 5-decreased stress on big-game herds on winter range at the end of a harsh winter. 6-better protect sensitive ungulate populations of bighorn sheep and moose. 7-increaced recruitment rates due to higher calf, fawn, and lamb survival rates. 8-increased hunt opportunities, outfitter business, and other economic benefits. 2)I support the position of the Montana Shooting Sports Ass. Concerning the wolf management EIS. It is imperative that MFWP adopts a plan that represents those groups who have born the costs of wildlife conservation in this state -- Montana's hunters and stock growers. The final plan. Most similar to alternative 4 minimum wolf, must reflect the intent of our state legislature and be consistent with HB262, HB306, HJ32 and SB209 and preserve Montana's hunting heritage.

L0012: 1) I believe the contingent plan should be the adopted plan. Why the big hurry to delist? I am afraid we will undo decades of work to reintroduce them in a scant few years and we'll be back where we started. Why the hurry? So we can have open season on wolves? Also this way the federal gov't pays the majority of the costs. 2) Just make sure the state has major input and that ranchers do have flexibility in protecting their herds.

L0013: 1) I support alternative #3 which allows for the maximum number of wolves, nature has a glorious value in and of itself, we must wake up to this fact. 2) Need a compensation program included. Trapping is a cruel method of control and should not be used.

L0112: 1) I prefer alternative 1. status quo. Wolves are just recovering and we need more than 180 in the entire state. Let's put aside our anthropocentric greed and let other species flourish. Ours is the only population rampantly out of control. 2) I would modify this alternative to add state/federal reimbursement for losses due to predation though were we to choose this alternative, Defenders of Wildlife would continue their funding. Lets share the planet, and one of the few places we have left.

L0142: 1) Sirs, I feel opinion of the majority of Montanans was not heard by USFWS and MTFWP regarding wolf reintroduction, conservation and management, livestock operations and how we manage stock is now changed forever. Wildlife populations, numbers we have all cooperated with enhancing, will begin to diminish. Back country users will be injured, killed or removed from public lands because of the agency's intentions and mandates. Wolves do cause livestock loss and damage. Wolves are killing wildlife. Wolves will injure or kill people. The preferred alternative, as described is positive. The bigger question in my mind continues to be "is there a place in Montana in today's society for introduced wolves? From my perspective with all impacts of this animal considered I say no.

L0151: It is clear to me that FWP has thoughtfully attempted to balance the contentious issues surrounding support for a viable population of gray wolves, conflicts with livestock, human safety, and long term funding for wolf management. I am impressed with the comprehensive nature of the preferred alternative. In particular, the long-range objective of building public support so as to preclude the need for either artificially capping wolf numbers or define their distribution throughout the state is greatly appreciated. Willingness to allow wolves to strike their equilibrium within the system reflects the progressive nature of the alternative. Whether 15, 20 or 100 breeding pairs are used as the trigger point for toggling management actions, that trigger will only be as good as the FWP commitment to advocate on behalf of this species. Given the national interest surrounding gray wolves, I believe it is entirely appropriate for the federal government to continue to provide financial support for Montana's wolf program after delisting. This support should continue for as long as it is needed to properly manage wolves in the state.

E13: 1. The best alternative is #2. This plan was written by a diverse group of Montana citizens with considerable input from others interested in the situation. Montana needs to be able to manage the species not the feds. 2. No.

E3: 1. I would prefer no change since the wolves would still be protected under ESA. Yes wolves have returned but they should be protected and respected. Putting wolves in a bigger cage limiting how they live and culling them does not make wild wolves. It would be nothing more than a bigger petting zoo. And if this sort of activity were done to humans it would be banned immediately for being cruel. Wolves have every right to live on this world as much as humans do and that should be honored. 2. Science needs ethics so I would love to actually see these changes to the No Action alternative and the others too. If there was No Action the FWS shouldn't run it. They are already in league with the ranching community that wants them dead and have already killed many wolves. Non lethal methods when dealing with wolves in livestock depredation incidents should be made into law. And the wolves should not be killed. Relocation wolf sanctuaries tranquilizing wolves to relocate the ones that come near cattle are an option without killing them. Humans have nothing to fear from wolves but humans should fear humans all the more.

E21: 1. I am the owner of 50 acres in the North Fork of the Flathead River Valley. I am in favor of the preferred alternative because it provides flexibility to manage wolves over time and keeps control of the management process in Montana. I feel the preferred alternative is balanced and does not favor any one particular group. Thank you for your efforts to resolve these important and contentious issues. 2. I would like to see a better measure of wolf populations than number of breeding pairs. In this respect I think Wyoming's definition of the number of packs would be a better measure.

E38: 1. I believe that protection of the wolves is one of the most important issues facing our state. I support the additional wolves plan. It is our responsibilities to protect all wildlife this includes predators. We have more than enough cows and there are agencies that will reimburse the ranchers for the loss of livestock. If we don't save and protect these animals who will? 2. I believe that anything that we can do to increase the chances of wolf survival are most important and to me that means increased numbers. Thank you for reading this.

E41: 1. Wolf Management Position When there is a problem between a rancher and a wolf trap and move the rancher! Move the farmer! Move the suburbanite! Stop the development! Draw the line! This is a last opportunity to preserve renews and maintain national treasures: True wilderness and the wolf. There are only some last vestiges of true wilderness capable of supporting the wolf and other major predators so preserve them. Wolves and other predators should have rightful a place in those wilderness areas. I think that we all need it truly wild places even the vicarious pleasure of knowing that they are there. The last wild places belong to all citizens not just local ranchers and farmers and hunters. National parks forests and game reserves are a national treasure not just a local or state treasure. The federal government Fish Wildlife and Parks should maintain control of wolf management. The states have a dismal record of protecting wildlife. Wildlife particularly predators under the control of stockgrowers and hunters' is outrageous given their history of annihilation or push to a fringe existence of near extinction. Wildlife in national forests federal lands parks and reserves belong to the nation not the states and not localities. Ranchers and farmers know managing the land in the sense of feeding stock and planting not managing wildlife. They have to be bribed or paid to do that. What Montana has to offer some true wilderness is an economic boon to the state. It attracts tourism hunting and those who want to live in such a state. Most other states have already blown it under the same mentality of stockgrowers farmers developers foresters a mentality that argues for everyplace being as safe as a city park. The mentality that argues against wolf existence is an old one of entitlement power and control self-centerness concrete thinking anger fear hysteria manifest destiny (entitlement) and anthropocentric. The arguments that force and back wildlife into the fringes particularly predators out of existence are old and irksome: Development another blade of grass for stockgrowers being at the top of the food chain for hunters they are a threat to those nearby. I think that the line has to be drawn at the boundaries of national parks forests reserves and federal lands in the areas where wildlife has a foothold. Those who live nearby whether suburbanites ranchers farmers or others have to tolerate the wildlife and not infringe further. We have taken enough! We have raped and rampaged the land to the edge of the last 2-3%! And we are arguing about that. Those who want to wipe out the last of it can move to the other 98% that is safe for them. Farmers and ranchers can be reimburse for expected losses. Hunters can have another animal to occasionally hunt and otherwise tolerate as part of the wildlife system--they want to be in the wild and have a

primordial experience don't they--or do they just want to guide to point out a critter and say shoot! On the fringes it belongs to wildlife to the predators to the wolf. We visit we play in their area we live nearby; then we tolerate take the risks or don't go there don't live nearby. By the way my father is a rancher. I am a hunter. I have been a horse rancher. It is a much better world if there is room for us all. 2. FWP should maintain indefinite control. The population should be allowed to be larger--186 wolves way too little. There should be no shooting allowed by ranchers or farmers only wildlife managers for control purposes. The emphasis should be on reimbursement for stockgrowers and farmers rather than kill permits. Hunting should not be permitted even special hunts. The states stockgrowers farmers outfitters should have no hand in management. This is a national treasure not a local or state authority. Wildlife especially endangered or threatened species belong to the nation even if they are on rancher farmer suburbanite land

E44: 1. First of all one thing needs to be clear what the whiney cry-baby ranchers want has to be the last thing we are concerned about. They want one thing to be able to shoot any wolf on site. Wrong! If they find themselves in financial trouble we need to say go get a job at safeway. This is the same thing that everybody else is faced with. Wolves may need to be managed but I don't any of your options are no target. Outfitter's interests need to be the next lowest concern. If they don't like it tell them to go back to wherever it is they came from and if they are from here we need to tell them we don't owe a living. I love ELK and have hunted them my entire life. I also like wolves and having them in this state. If the ranchers get their way (and they will) wolves saga will be over. 2. What the ranchers and outfitters really want is an open season on any wolf they see. That is flat out wrong. They will probably get this done but that is still wrong. Maybe now this is just a thought for every wolf a rancher shoots they owe me $ 10 000 because that's what it's worth to me to see one. Sounds fair to me.

E45: 1. NONE. FWP has failed to address the problem and impacts of wolves on Montana big game species. I submitted 7 pages of comments last year on the so-called 'conservation plan' and participated in the Butte meeting. Every comment was ignored. Your Department is only listening to the pro-wolf people and it is a disgrace and you want the FWS money. You might as well stamp U.S. Fish and Wildlife Service on your plan. Are we to be led to believe the DROUGHT is killing calf elk in YNP? We will reduce special permits to feed wolves we don't want?..Get real! FWP must think we are pretty damn stupid. You need a new Director like Frank Dunkle or Wynn Freeman and your job should be fish and game management not endangered species. Most all of the wolves are out of the so-called recovery area so how do you justify that? Your E.I.S. doesn't even consider big game and is a Dept. of Livestock E.I.S. so why didn't they write it? ...a big joke!! Do you accept photos? I have the perfect photo for your E.I.S. Director Hagener doesn't have a clue!! 2. DROP the entire program and get serious about game management and stop wasting sportsmen's dollars on this crap!

E51: 1. The only alternative that will protect the wolves is one in which management of the wolves is under FWP alone (NO Montana State control!) and that would continue the protection of the wolves as an endangered species. 2. I do not think the state of Montana can be trusted to manage the wolves in a manner that will provide any protection to the wolves at all. Rather the protection safety needs or value of the wolves would almost assuredly run a distant LAST in any and all instances where a decision between wolves or cattle/ranchers would need to be made. Montana state elected and appointed officials do NOT have a good track record in their concern for wildlife or wilderness or anything concerning environmental issues in general for that matter. Nor do they respect the will of the people unless it supports what they intend to do anyway. So even though public support for the protection of wolves has been shown to exist it would have little or no impact on actions the state would no doubt take to jeopardize the wolves existence. Within a short time the wolf population would dwindle and then be no longer viable as one by one wolves would be murdered as a result of supposedly becoming a predator to cattle sheep or? The wolves are needed; they are an important piece of the natural balance of wildlife but to continue to thrive continued protection from human predators is needed. Please do not give ANY control or voice in the matter to the state! Thank you.

E64: 1. I am a native of Montana and as such am deeply concerned about protecting the forests and wildlife of Montana. I strongly oppose de-listing wolves and having Montana manage wolves for the following reasons: 1) I do not believe that wolves have had enough time to establish themselves. There needs to be more breeding pairs and there needs to be a better political climate (meaning more receptive) before delisting. 2) Although it is clear that wolves are making a comeback in Montana it is not clear that wolf habitat is improving. A lot of habitat is hanging in the balance--especially with the policy direction of the Bush administration. Before delisting roadless areas that are not protected need to be secured. Additionally there needs to be improved migration corridors between existing wolf populations to avoid genetic isolation. Finally more needs to be done to remove livestock from areas that wolves frequent. Until all these things are accomplished wolf habitat will not be good enough to sustain a de-listed wolf population. 3) For decades wolves were subjected to persecution in the lower 48. It has taken a lot of money and effort to begin reversing the damage. It would be foolish to risk losing the gains made until there is more certainty that the gains will not be lost. 2. Increase the number of breeding pairs to 200. Is that an arbitrary number? Of course! But so is 10 15 and 20. Montana is a big state--quit being so damn miserly with your benchmark numbers!

E80: 1. My wife and I have visited Montana and the Greater Yellowstone area 6 times in the past 12 years and intend to return. Much of our interest has centered around the abundant wildlife; wolf reintroduction has been a big part of that interest. The research that we have seen so far strongly supports the position that wolves are a keystone species in the area and that the ecosystem (not to mention the economy of Montana) is much healthier as a result. As such we urge you to keep this in mind as you consider delisting the wolf. While we would prefer not to be tied to a specific alternative we wish to suggest the following points. 1) The program's funding needs to be assured before delisting is considered. 2) There needs to be clear guidelines on when and under what conditions wolves can be killed. 3) Since so few cattle are actually killed by wolves we recommend that Montana pay for such losses. While this may sound unwise, consider that much of the recent increased interest in Montana is driven by the excitement of wolves being reintroduced. I strongly suggest that the value wolves have for your economy strongly outweighs any reimbursement cost for lost livestock. 4)Wolves should be managed as you manage other wildlife. That is there should be no artificial limits put on wolf populations. Rather they should be allowed to fluctuate in tune with the environment. Thank you for the opportunity to comment on the wolf recovery EIS. We urge you to do what is right for the ecosystem wolves and Montana's economy and not what may serve the short sighted goals of some entrenched interests. I can assure you that our interest in Montana will be greatly diminished if wolves are not allowed a place in Montana's ecology. 2. see my comments above

E2: 1. To whom it may concern This comment is on a few concerns about the wolf conservation one for what I study about wolves is that they are more likely to run from a human than to attack. And also us the people have no right to decide if the wolves or any other animal should be murdered! The wolves and other animals were here before us and they should be here after us. Their lives are much more harder than ours we do not have to hunt and risk our lives for food protection everyday they are worried if some dumb human is going to hunt them down for fun or pleasure! I have a little bit of Native American blood in me to which is why these majestic wolves are so important to the world and ME! I am not an adult but I am a human to which I would love to see the wolves protected. From this day forward. Wolves have a family unit just like ours a mother a father brother and sister's grandparents and so forth. How would you like it if you were the wolves and they were you? You may not listen to other people or even me but do me a favor Listen to the WOLVES their song at night what will the Mountains and forest be without their song that has been around for ages? Think about that and think of the people and me who love the song of the wolves. The Wolves and I thank you for your time.

Administration

Summary of Comments: These comments address state and federal responsibilities, the current legal status of wolves, their recovery, the federal and state delisting processes and the progress of planning efforts in Idaho and Wyoming. Some comments support wolf delisting and state management. Closely related comments mention concerns about impacts to Montanans if delisting is delayed much longer. Other comments oppose delisting and advocate continued federal management. Some comments suggest that USFWS has not satisfied the legal requirements of ESA. Other comments prefer that wolf recovery efforts be terminated altogether and that wolves are removed from Montana. Still other comments suggest leaving all wolf management up to private landowners. Some comments support the involvement of USDA Wildlife Services in resolving wolf-livestock conflicts while other comments oppose WS involvement. Some comments want FWP to coordinate wolf management with adjacent jurisdictions (e.g. Indian tribes, the states of Idaho and Wyoming, National Park Service). Several comments say that actions taken during the 2003 Montana Legislature establish new sideboards to a state wolf management program. Some eastern Montana counties passed resolutions "prohibiting the presence, introduction, or reintroduction of any animals which pose a threat to public health, safety and livelihood" of their citizens. Some comments indicated a preference for an annual interagency/public workshop instead of a standing wolf advisory council.

Response: While the restoration of wolves in Montana occurred through the combination of natural wolf recolonization and reintroduction, the population in the tri-state area has attained the biological benchmarks of species recovery according to USFWS. The question addressed through this EIS is how a recovered wolf population will be managed and by what agency or jurisdiction. Whether USFWS has satisfied the legal requirements of ESA is not for FWP to decide. However, the No Action Alternative does present a scenario in which USFWS continues to manage Montana's wolf population. FWP's preferred alternative (Updated Council) would have FWP assume conservation and management responsibilities for wolf management in Montana when USFWS completes the administrative steps to delist the wolf from ESA protection. Both the Council and FWP recognize that managing wolves will be controversial and challenging. FWP is aware that there is distrust of its intentions, given the highly controversial aspects of the public and political debate surrounding wolf recovery and management. However, FWP and the Wolf Management Advisory Council have been very explicit in stating their intentions and commitment to maintaining the restored population and integrating it into Montana's wildlife heritage.

Montana's statutes charge FWP with wildlife conservation and management responsibilities. Whereas FWP may have limited experience with wolves at the outset, it has confidence in the professional capabilities of its staff to learn and get up to speed quickly. In fact, some staff are gaining experience managing wildlife in the presence of wolves and by default their knowledge and experience increase. Montana statutes charge both FWP and Montana Department of Livestock (MDOL) with resolving conflicts and damages to private property caused by wildlife. Therefore, MDOL will be involved in wolf management in Montana either directly or indirectly. Damages caused by other large carnivores (e.g. mountain lion, black bear) are handled by USDA WS through a Memorandum of Understanding between FWP and MDOL. The preferred alternative would have FWP contract with WS to address wolf-conflicts through MDOL. In a proactive manner, FWP, WS or other organizations will also work cooperatively with livestock producers with an increased emphasis on proactive efforts to reduce the risk of livestock conflicts. Examples are extra fencing, additional guarding animals or herders, or pasture trades which could reduce livestock vulnerability during certain key times. If conflicts do occur, WS would respond to landowner complaints, conduct field investigations of damages, and carry out control activities for problem wolves. FWP has noted the concerns about WS involvement expressed in some public comments. FWP envisions the resolution of wolf-livestock conflicts as a very interactive endeavor where the two agencies would be working in concert and with livestock producers, but FWP has the ultimate responsibility for determining the disposition of wolves. Actions by WS and FWP will be guided by the incremental approach described within the context of adaptive management. Details are provided on pages 76-82 of the Draft EIS. In those counties where there is no USDA WS agent, FWP will coordinate with the local county authorities. FWP will begin working on these Memorandums of Understanding when this EIS process is completed.

The preferred alternative stated that FWP would coordinate with other agencies and jurisdictions on topics of mutual interest. This would include federal agencies, the states of Idaho and Wyoming, Indian Tribes, and non-governmental organizations.

FWP is aware of and sensitive to the concerns expressed by eastern Montana counties about the potential for impacts to livestock producers and local prey populations as well as human safety if wolves become established. While state laws supercede non-binding county resolutions in much the same way as federal laws supercede state laws, FWP believes the concerns can be addressed and alleviated by the preferred alternative. So long as the number of breeding pairs in Montana exceeds 15, FWP has flexibility in management options without artificially "zoning" wolf distribution, particularly in areas that are primarily mixed ownerships, private lands, and agricultural. See the preferred alternative in the Final EIS for an in-depth description of the management tools that could be available to FWP and livestock producers.

The 2003 Montana Legislature passed several new statutes that have potential relevance to wolf conservation and management in Montana leading up to and upon delisting. HB 283 directs the Montana Attorney General to analyze the state's options related to delisting and, in cooperation with FWP, to prepare a proactive legal opinion for possible litigation on recovery of damages and costs incurred by the State of Montana that are associated with wolf reintroduction. The Attorney General's Office and FWP have already been in communication. HB 306 is an act submitting to the electors of Montana in November 2004 an amendment to the Montana Constitution recognizing and preserving the heritage of Montana citizen's opportunity to harvest wild fish and wild game animals. FWP does not foresee any conflict if the electorate passes this proposed amendment. In fact, if it does pass and if Montana's wolf population increased to the point where population regulation through hunting and trapping became appropriate, these activities would be incorporated into that heritage as well. SB209 requires FWP to publish an annual game count, estimating to the department's best ability the numbers of each species of game animal in the hunting districts and administrative regions of the state. Under the preferred alternative, FWP proposes to have an active public outreach component in the overall management program, including preparing annual reports, making information available through FWP's website, giving presentations to interested groups etc.

HB262 describes legislative intent concerning FWP management of large predators. FWP and the FWP Commission must interpret HB262 within the context of other specific legal obligations and statutes that FWP must comply with, including the conservation and management of wildlife in such a manner that prevents the need for listing (MCA 87-1-201, MCA 87-5-107). State law also guides the FWP Commission (MCA 87-1-301). FWP believes that once it has met its legal requirements to maintain the recovered population and the population is secure, then it and the FWP Commission will be able to exercise some discretion while implementing wolf management through the adaptive framework of the preferred alternative. FWP does not believe the preferred alternative conflicts with HB262 because the preferred alternative describes a proactive approach to integrating the management of predator and prey populations to maintain traditional hunting heritage and wildlife viewing in Montana. The preferred alternative also contains specific provisions for agency personnel and private citizens to protect themselves if threatened and their domestic dogs if attacked and for citizens to protect their private property if a wolf is attacking, killing, or threatening to kill livestock, according to legislation (SB163) already passed by the 2001 Montana Legislature. These three primary goals identified in HB262 are also guiding principles underlying the preferred alternative which can be traced back to the work of the Montana Wolf Management Advisory Council and their *Report to the Governor* submitted in December 2000.

HJ32 is a non-binding joint resolution requesting that the Governor, the Montana Congressional Delegation, and the US Secretary of the Interior seek the immediate delisting of the gray wolf. USFWS, the Governor, and FWP all agree that the gray wolf population in the northern Rockies has recovered and can be delisted. HJ32 urges the Governor and FWP to seek federal funding for wolf management. The federal government has already provided funding through the State Wildlife Grants program and through USFWS to help Montana prepare for wolf management. The Governor and FWP continue to work with officials in Idaho and Wyoming and the tri-state Congressional Delegation to secure adequate, long-term funding. HJ32 also urged FWP to adopt a certain definition of "breeding pair" that, in part, would have FWP determine whether or not a pack counts as a breeding pair when pups are six months of age. The definition suggested by HJ32 in one respect is more conservative than the federal recovery definition, which when implemented, has allowed for the replacement of alpha animals if one of the biological parents of the litter is killed and another adult (male or female, respectively) is present or joins the pack and the pack is capable of breeding the following year. USFWS has documented this and counted the pack as a successful breeding pair on at least one occasion. In addition, it is difficult to count and classify wolves without adequate snow cover using either aerial or ground tracking methods. FWP's preferred alternative outlines a definition that is consistent with the federal recovery definition. ESA requires USFWS to oversee state management for at least five years to assure that the wolf population does not decrease to the point of requiring ESA protection once again. FWP and the Wolf Council believe that monitoring and counting breeding pairs according to the federal definition will be useful for data comparisons and important to document. HJ32 also called for the federal government to abandon authority over wolves in Montana upon delisting. Indeed, upon delisting the authority and

responsibility for wolf management falls upon the State of Montana and FWP. USFWS will maintain some oversight, primarily through interagency administrative coordination, as required by ESA, for at least five years. Even during that oversight period, state laws guide state officials. Lastly HJ32 urges the Montana Attorney General to join into any lawsuit filed in opposition to federal delisting. While this direction pertains to the Attorney General's Office more directly than FWP, FWP is already working with other western state fish and wildlife agencies and other states' legal councils in anticipation of litigation.

FWP does not believe that the preferred alternative conflicts with these new actions by the 2003 Montana Legislature or any other state laws or administrative rules. On the contrary, the direction established by the preferred alternative is the most consistent of all the alternatives. In it, FWP will meet its legal requirements to maintain a secure, recovered population, comply with state laws and Commission policy, integrate the wolf within Montana's wildlife heritage, while at the same time lessening potential negative impacts to those most directly affected by wolf presence.

Whereas the original Wolf Management Advisory Council was appointed by a former Montana governor and this group alone made recommendations to FWP, their meetings were open to the public as per Montana's "open meeting" law. Members of the public in attendance were provided an opportunity to speak or submit written comments. While the preferred alternative calls for a standing advisory council, members of the public will still be able to attend and provide input. FWP also expects to have a regular presence at various stakeholder meetings to exchange information and foster working relationships with all interested parties. In addition, FWP will be available to attend meetings and workshops at the local level, whether county commission, local grazing district, rod and gun club, or conservation organization. FWP is certainly not opposed to the annual workshop concept described in the other alternatives, but is not committed to establishing that as the primary means to collaborate with stakeholders at this time. FWP could still hold a workshop even with the establishment of a standing advisory council.

Representative Comments:

W12: I do not like to see federal government taking control of Montana resources. I would like to see the state take over.

W18: I want state/local folk to be able to take more control. Not federal government.

W23: I like the idea of the state controlling problem wolves.

W26: What definition of threatening will there be?

W53: I like alternative #2, but I am concerned about why then would be removed from the state list, then after that, what protection would they have?

W94: Adaptive, local management is important.

W98: Seems likely that there will be a lot of delays. What will come after the delays?

W110: Support delisting and state management.

W113: Rather have state officials responding to conflicts because they will be sensitive to local people/issues.

W120: Grazing on federal land, federal and state managers should handle conflicts there. Problems handled with aversive conditioning first before animal destruction. Maintain close to federal penalties for poaching or illegal taking.

W122: Wolves should have equal right to take wildlife as any hunter. Strict, evaluated poaching penalties. Fines should be higher than other species due to low numbers. Less compensation for livestock losses on public lands.

W190: Emphasis on non-lethal methods. Would like to Wildlife Services excluded from this whole process. People who are managing the populations should be doing the on-the-ground work.

W195: FWP should manage. Under alternative #4, with FWP addressing local concerns.

W211: CMR should be included in same rules as other lands in Montana.

W226: Management should be by state (FWP).

W282: Wildlife Services – will they be prompt?

W286: Does any alternative remove the federal government?

W321: Ask Wyoming for special session.

W334: Too much money is going to administration and not enough to the on the ground problems.

W351: Leave it up to the landowners to manage.

W357: Who is going to pay for the lawsuit, once the wolves are delisted and when the anti's file suite to keep the wolves listed?

W369: Federal dollars bring federal control. That's a problem.

W434: Federal government should be responsible for wolf management. It's expensive to fly helicopters. Wolves will have our wildlife. Need some local control.

W450: Feds have no credibility. Don't want wolves, but federal management is not an option. Alternative #2 with amendments.

W480: On all budgets (all alternatives) some of the $800,000 b8dget needs to be reapportioned to Wildlife Services – more needs to be allocated to Wildlife Services.

W481: Are the other two states doing what Montana is doing? It's important to be compatible.

W505: Local control essential, referring to state level. Once there is a recovered population, mockery of the ESA Law if it is not delisted and managed.

W509: Delist as soon as we can.

W528: If we use private funding sources would involve private interests; should be public funding; want people of Montana, Idaho, and Wyoming to have the most say; should be state funding only.

W544: I prefer Alternative #2. Stipulations – 1) need seven regional wolf specialists 2) to support this need to raise hunting licenses 400% 3) Until that time, feds need to pay 100%

W586: Very important for state control.

W576: Regulation can be achieved the best by system overseeing Montana, Wyoming and Idaho to make sure there's an effort across state lines with federal funding.

W674: State needs to handle our wildlife. Does a good job with management.

W755: I feel the wolf can be delisted right now, but should not be due to the fact that Wyoming does not have an adequate plan.

W759: I don't want to see Montana Department of Livestock involved at all. Don't include interstate breeding pairs in the total count.

W784: Question: Is the state of Montana going to assume liability (when wolves get on my ranch)?

W786: Needs to be more defined who is liable, and who will pay.

W797: I feel they need to be managed by state, not federal government.

W808: I like the idea of state doing management program, and have the feds take care of the additional expenses.

W828: I'm thankful they're involving Wildlife Services.

W831: Why is FWP stuck with this plan when they already have enough to do?

W851: I am concerned that the legislature will take over wolf management from FWP.

W852: Montana Legislature has done well in protecting Montana's interests in managing wolves.

W862: It's important that the public remain involved in the process.

W874: I want to see an accurate history from FWP on wolf history.

W890: I feel that public comment on the EIS had no effect on what was printed last year.

W902: Local people should have say and control, not the state or the feds.

W911: I am concerned about litigation for getting wolves delisted.

W934: Get under state control – the sooner the better.

W976: I could see a real advantage to FWP managing – to respond to a problem – I could call FWP and a game warden would be up there.

W977: If Wildlife Services is going to continue, they need to get more people in the field.

W980: Who know how long the Federal Government is going to take to delist them.

W986: From what I hear, it's going to be better to have them under state control … if you don't have the funding are we better off where we are now?

W991: If it's going to take 2-5 years – I feel we need to see progress before they're delisted.

W1002: Respond to livestock conflicts – FWP as well as Wildlife Services should respond to livestock conflicts. I would like to see FWP respond.

W1027: If Wyoming doesn't' fall into line, wolf will never get delisted.

W1028: Don't think FWP should manage – they didn't create the problem. If they do, get federal funding.

W1035: Currently staffed people will get spread thinner and will end up with less accurate data.

W1081: Montana residents need to have say in what tool (trophy permit) will be used to regulate numbers/ option with best economic benefit.

W1086: Don't listen to nonresidents. You work for the residents of Montana.

W1110: Funding and personnel needs to be addressed to adequately manage a wolf harvest.

W1150: Montana needs to get involved now.

W1151: Problem with contingency plan is that it is under Federal management

W1152: Consider HB 283 … inactivity is a killer; it costs more $ the longer we wait.

W1153: Q. What is the feasibility of the contingency plan; if other factors keeps the status as endangered. Let's do it if the USFWS will accept our plan, regardless of which plan (wouldn't have to the contingency plan) – ie get the federal government element out.

W1172: Likes state involvement, but we have to pay.

W1184: Paranoid about the good old boy's in Helena relative to handing wolf management over to the state (political concerns) ranging from the governor's office to the legislators.

W1190: Move on with this business.

W1220: One general statewide plan will not work for all areas.

W1221: Need to implement some sort of wolf management now as the wolf population and pack numbers continue to grow.

W1231: Don't want FWP to stall anymore. Want Montana plan implemented ASAP.

W1233: What is FWS role in responding to conflicts?

W1241: Lack of trust for Washington DC – keep in the hands of the state. No matter what alternative, keep feds out.

W1245: If wolves are delisted, would that require an increase in FWP personnel?

W1272: Any hunting or killing of wolves needs to be done by FWP officer, or trapper/ADC.

W1289: Alternative #2 – federal or state officials respond to livestock issues.

W1294: How are we going to get by the judges?

W1312: State management will maintain stable populations.

W1321: How will FWP address manpower/time issues?

W1359: Must get wolf delisted so we can move on. Concerned if Wyoming will hold it up for others.

W1360: Livestock conflicts – all alternatives need to better define when things happen – when you can harass, shoot, etc. How close is close? How threatening is a threat? Use examples to help define.

W1367: Regarding #3, State of Montana officials should also respond to conflict situations.

W1369: State officials should respond to problems with federal funding to pay for it.

W1378: Regarding #4, encourage state in their management to stand up for their rights and follow state law regarding predator control.

W1384: Concerns about biologists work load – not in the field to monitor …

W1402: Keep ranchers in mind – keep paperwork and time to a minimum.

W1403: Need faster response to reported kills by wolves -- without makes document difficult.

W1424: If the "greenies" decide to sue because of delisting, who do they sue and who pays the bill?

W1442: Funding … how is that determined. What happens when program funding is cut? What happens to the program?

W1468: Plan more complicated and expensive than it needs to be.

W43: 1. Must have a plan acceptable to the feds or they won't delist. A lot of good folks have done good work here. 2. Emphasize need for permitted lethal control. This is the only way to gain their respect and make them avoid humans and livestock. Acknowledge that a pred-prey cycle exists and don't overemphasize population controls. Emphasize wild habitat. Try to talk some sense into Wyoming or delisting won't occur.

W50: 1)I would suggest a split between 2 and 4. I would like the minimum number of wolves with the least control by USFWS. I would lean toward #2 if necessary to keep USFWS out of the loop. Best spend all time on #5 because the lawsuits will stop them form being de-listed. 2)We need a control on the distribution of the wolves. It does not make any sense to decimate a healthy elk and deer population. The wolves have a minimum actual cash value to Montana and the deer and elk do bring big dollars to Montana.

W55: 1)None. The local people do not want wolves here. The federal government spent millions to get rid of them. If people want wolves put them in the city, not here. 2) Eliminate them now!

W56: 1)#2. I prefer our state agency manage the wolf. I don't trust the past double talk of fed. Agency.

W63: 1)Alternative #1 Local feelings are unfriendly to wolves. All other plans have breeding pair limits that are much too low. Dept. of Livestock has an adequate compensations system. I totally oppose hunting wolves, as well as bears and mountain lions. Why waste scarce state funds when we can rely on federal dollars? 2)Nothing. More action is needed at the federal level.

W78: 1) Combination - wolf remains listed but managed based on quantity of predation/wildlife vs. cattle. FWP manages wolves, state can address local concerns. Prey management balanced with predator management, Full implementation requires funding from public and private sources. Federal officials respond to livestock conflicts under agreement with state of Montana. Regulated harvest. State and others develop compensation program. Federal rules guide response to livestock conflicts by owners/FWP.

L0149: -1)Alternative #4 minimum wolf is best. Why? 1-less wolf-livestock conflict. 2-less wolf-human conflict. 3-federally funded versus sportsman's dollars. 4-decreased predation of big game herds ensuring stable big game license sales. 5-decreased stress on big-game herds on winter range at the end of a harsh winter. 6-better protect sensitive ungulate populations of bighorn sheep and moose. 7-increaced recruitment rates due to higher calf, fawn, and lamb survival rates. 8-increased hunt opportunities, outfitter business, and other economic benefits. 2)I support the position of the Montana Shooting Sports Ass. Concerning the wolf management EIS. It is imperative that MFWP adopts a plan that represents those groups who have born the costs of wildlife conservation in this state -- Montana's hunters and stock growers. The final plan. Most similar to alternative 4 minimum wolf, must reflect the intent of our state legislature and be consistent with HB262, HB306, HJ32 and SB209 and preserve Montana's hunting heritage

L0153: 1)It appears alternative #2 is the best of the ones presented. I would rather see the state manage the wolf population. The federal government only introduced them but does not properly manage them. 2)Funding is a concern. Given the current situation in this state where is the money going to come from? The federal government has to help with this. Prey management is a concern if necessary wolf numbers must be reduced, not hunting opportunities.

L0159: 1)#4 It will help all sides considered. 2)Stick to taking the wolf off the endangered species list.

L0165: I urge you to stay with plan #1 - no action. I have more faith in the feds managing wolfs than I do the state of Montana FWP.

L0189: I am writing to express my support for the no action alternative as outlined in the Draft EIS. I believe that wolves should stay on the Endangered Species List, as this status reflects the health of their population in Montana. The U.S Fish and Wildlife Service, not Montana Department of Fish, Wildlife, and Parks, should continue to manage wolves in Montana.

L0236: Alliance for the Wild Rockies supports the no action alternative. It is our position that in regards to wolves, the USFWS has not satisfied the legal requirements of the ESA.

L0258: 1)I am concerned about the number of wolves that are already here. I think the state of Montana should assume control of the population of wolves. There are dozens of them near our homes at this time. 2)I think wolves should be managed the same regardless of who owns land inhabited by wolves.

L0288: You must conform your list of alternatives to only that which the Montana State Legislature has allowed by law. I concur with the MSSA position on the wolf EIS.

L0340: 1) Wolf management should be under Montana state control only as we are the people directly affected by them. Consequently it will be more expedient to handle problems ourselves. 2) There should be NO difference between private ground and federal ground when problem wolves need to be removed. Meaning livestock producers can kill problem wolves on leased, BLM, Forest Service etc ground.

L0073: 1) None of the 5 alternatives are acceptable. 3 are absolute since this legislative session. I prefer the wolf to be a predator like the coyote. 2) Classify the wolf as an unmanaged predator.

L0101: 1) Wolf should remain on federally threatened list. Let FWS manage wolves. Let the people who study wolves have the biggest say how wolves should be managed. Let stock growers who graze on public land pay for wolf up keep. If they graze on public land, they get no compensation, that's the price they pay for doing business on public land. 2) Full implementation public and private. Livestock belong to individual and companies but wolves belong to all Americans so let the government fund the wolves. Do not pay anyone that build a home near forest and public land for their pets. If they want to live in the wild they have to accept all that goes with it.

L0119: 1) No. 2 - state run - Recognize landowners rights to make a living, recognize local areas. 2) Allow any wolf that comes near local residents to be dealt with. I believe Canada has the right policy. Their wolves are healthy, wild, plentiful and no problem to government.

L0128: 1) If the federal government wants wolves in Yellowstone Park they can manage them and pay all expenses associated. Any wolves leaving the park would be a predator.

E13: 1. The best alternative is #2. This plan was written by a diverse group of Montana citizens with considerable input from others interested in the situation. Montana needs to be able to manage the species not the feds. 2. No

E31: I support the comments and recommendations made by the Montana Shooting Sports Association. Their position is logical reasonable and balances the competing interests of man and wolf in an appropriate manner. As a sportsman who visits Montana frequently I support the MSSA position on the wolf issue. 2. I support the comments and recommendations made by the Montana Shooting Sports Association. Their position is logical reasonable and balances the competing interests of man and wolf in an appropriate manner. As a sportsman who visits Montana frequently I support the MSSA position on the wolf issue.

E33: 1. None of the alternatives is wholly satisfactory to me. Refer to the comments submitted by the Montana Shooting Sports Association for a clear statement of a better alternative. Alternative 4 is closest to my wishes. 2. Treat wolves as the predators and pests that they are whenever they stray outside wilderness areas. They should be managed by the hunters in the field and the ranchers protecting their livestock not by federal government employees.

E51: 1. The only alternative that will protect the wolves is one in which management of the wolves is under FWP alone (NO Montana State control!) and that would continue the protection of the wolves as an endangered species. 2. I do not think the state of Montana can be trusted to manage the wolves in a manner that will provide any protection to the wolves at all. Rather the protection safety needs or value of the wolves would almost assuredly run a distant LAST in any and all instances where a decision between wolves or cattle/ranchers would need to be made. Montana state elected and appointed officials do NOT have a good track record in their concern for wildlife or wilderness or anything concerning environmental issues in general for that matter. Nor do they respect the will of the people unless it supports what they intend to do anyway. So even though public support for the protection of wolves has been shown to exist it would have little or no impact on actions the state would no doubt take to jeopardize the wolves existence. Within a short time the wolf population would dwindle and then be no longer viable as one by one wolves would be murdered as a result of supposedly becoming a predator to cattle sheep or?? The wolves are needed; they are an important piece of the natural balance of wildlife but to continue to thrive continued protection from human predators is needed. Please do not give ANY control or voice in the matter to the state! Thank you.

E53: 1. Leave the wolf protected the federal Endangered Species Act. 2. I believe that delisting the wolves and handing their population management over to the state is a death threat and will guarantee their final extirpation: through allowing legal hunting of wolves as a means of lethal control.

Prey Populations

Summary of Comments: These comments address wolf-prey interactions, potential impacts of wolf predation on Montana big game populations, how wolves and ungulates will be managed, how other predators and other wildlife will be managed, and Montana's hunting heritage. Some comments reveal significant concern for real and/or perceived declines in prey populations where wolves have become established. These comments ask FWP to manage wolves aggressively to ensure that the traditional and historical levels of hunting opportunity for Montana citizens are maintained. In other words – FWP should not decrease human hunter opportunity to benefit wolves if prey populations decline. Conversely, other comments support the positive ecological role wolves and wolf predation can play on the health and vigor of prey populations; furthermore, these comments oppose aggressive wolf management to benefit big game hunters. Still other comments agree with FWP integrating management of predators and prey (as described in the preferred alternative) and encourage FWP to find a balance between predator and prey populations. Some comments say that the impacts analysis of wolf predation was inadequate and downplayed the real negative effects on deer, elk, and moose populations. Several comments pointed out a need for greater emphasis on habitat improvement or protection (wilderness designation, conservation easements etc.) due to negative human impacts on wildlife habitat.

Some comments from self-identified hunters support for wolf restoration in Montana. Others oppose wolf restoration in Montana, describing field observations of prey population declines and that recruitment has been negatively affected by wolf predation. Still others express concern for bighorn sheep populations in the presence of wolves. Comments also

question how FWP will determine the degree of influence of wolf predation on prey populations relative to other environmental factors and what data FWP will use to make such assessments.

Response: Because of their long-term financial investments and willingness to restrict themselves when necessary, Montanans enjoy relatively liberal hunting seasons for more ungulate species than other western states. Hunters in Montana are able to experience a wide array of hunting opportunities for many different species using many different weapon types and during longer hunting seasons. In addition, many different types of hunting experiences are offered through the regulatory process because of the variety of objectives with which FWP manages hunting districts. The financial investments and sacrifices made by the hunting public to restore ungulate populations are significant. This successful restoration is a significant contribution to the wildlife heritage of Montana both now and for future generations. It also enabled the recovery and restoration or large carnivores such as gray wolves and mountain lions. FWP recognizes the importance of safeguarding the investments made in both ungulate restoration and large carnivore restoration. FWP strives to balance the success and safeguard those investments.

FWP acknowledges that wolves kill deer, elk, and moose that human hunters desire to pursue and harvest themselves. Bighorn sheep appear to be more vulnerable to mountain lion predation than wolf predation due to the rocky, steep terrain that sheep occupy. In some situations and under certain circumstances, wolf predation can affect the abundance and recruitment of prey populations. In addition, prey may alter their habitat use patterns in apparent response to wolf presence – which in turn may be affecting human perceptions of animal abundance. Indeed, FWP has adjusted human hunter opportunities in some hunting districts around Yellowstone National Park, due in part to declines in recruitment and overall abundance. While a direct cause and effect relationship has yet to be demonstrated, wolf predation is thought to be a factor in conjunction with summer drought, severe winters, and the presence of other large carnivores such as bears (black and grizzly) and mountain lions. In other places where wolves exist in Montana (e.g. northwestern Montana), wolf predation appears to be less influential than winter severity. Conversely, FWP has also documented declines in recruitment and animal abundance in areas devoid of wolves. To suggest that wolf predation is the sole factor affecting prey population oversimplifies a complicated set of ecological relationships that biologists don't understand very well.

It is a speculative exercise to predict impacts of wolf predation on prey populations as if wolves and prey existed in a vacuum and were unaffected by all the other environmental factors mentioned previously, as well as habitat changes such as forest fires or human development. Wolf predation in and of itself cannot be easily isolated from all the other factors and variables affecting prey populations, particularly in the absence of very long-term, comprehensive research data using radio telemetry. FWP cannot assume that changes in prey populations are strictly due to wolves. Similarly, FWP cannot assume that changes in hunter harvest (e.g. number of animals harvested, harvest per hunter day etc.) are due to wolf predation either. Hunter harvest statistics are influenced by another set of variables, including hunter participation, weather during the hunting season, status of the prey population, changes in hunting regulations or quotas which increase or decrease hunter opportunity, license prices, hunter preferences for what is harvested etc. FWP must recognize all the sources of interactions between variables and consider the "big picture." The reader is referred to Chapter 2 in the Existing Environment section of the Draft EIS for a more in depth discussion of wolf-prey interactions and big game hunting.

The impacts analysis for the alternatives is based on the variation in human hunter parameters (number of hunters, hunter days, and hunter opportunity for antlerless permits) because these are variables that FWP has historically measured with some degree of consistency and reliability from one year to the next. FWP also reasonably expects to continue collecting that information. FWP also collects survey data on the prey populations themselves, but these data are sometimes significantly influenced by weather conditions at the time of the survey. Nonetheless, when the two sources of information are taken together and tracked through time, trends can be detected. FWP cannot predict with precise certainty the direction or magnitude of change in prey populations, let alone attribute causes. FWP reviewed research and management information on wolf-prey interactions from a wide variety of sources and locations, including the northern Rocky Mountain states, Alaska, and Canadian provinces. Due to the wide variety of ecological conditions in which this information is collected and interpreted, FWP had to carefully consider the relevance and applicability of the results to Montana. While studying all research and management results can be enlightening, FWP relied most heavily on the work conducted in the northern Rockies, the upper midwest states (Minnesota, Wisconsin, and Michigan), and the southern reaches of Alberta and British Columbia while considering wolf-prey interactions and potential outcomes in Montana. These areas are more ecologically and physiographically similar to Montana than the natural environments in Alaska or

the northern reaches of Canada. The presence and distribution of domestic livestock, distribution of human settlement patterns, and the interspersion of mountains and valleys in Montana are important differences that must be kept in mind.

FWP acknowledges that wolf predation can reduce deer, elk, and moose populations. At a localized level, prey populations may be more influenced by additive predation. Predation pressures could also exaggerate a population decline initiated by other factors such as unfavorable weather or even slow population recovery, particularly if human harvest rates of antlerless animals are too high. FWP ungulate management programs will benefit from research results from ongoing studies as well as future new studies to examine these questions. Nonetheless, the preferred alternative is based on an adaptive management model that allows FWP to adjust wolf management in concert with prey species as described in their respective plans. The preferred alternative also states that other corrective measures to reduce ungulate mortality or enhance recruitment would also be implemented.

FWP will continue to improve and refine ungulate management programs. An adaptive management framework has already been developed for mule deer and will be developed for elk during the current revision of the elk management plan. FWP will continue to collect survey information on ungulate populations (e.g. trend counts, recruitment, census counts for mule deer in representative areas). FWP has already increased survey and inventory budgets for ungulates in select areas and budget requests for the overall wolf management program also include line items for enhanced ungulate monitoring and research. FWP will rely on all sources of data and work to develop new sources of data to improve knowledge of wolf-prey interactions and the degree of influence wolves may be having.

Representative Comments:

W24: Will hunting permits be adjusted to off-set impact from wolf predation?

W25: I do not want to see more wolves killed in exchange for more opportunity to hunt another big game.

W68: Alternative #2 balances predator/prey pretty well.

W188: I'd like some kind of density threshold, where there would be a cap on so many wolves per unit area. If crossed that threshold would be subject to control of some kind. This is to maintain satisfactory ungulate levels.

W203: I don't think wolves have any ecological value in Montana, Idaho, and Wyoming. Hunters paid for wildlife and its recovery. Hunters don't view wolves as valuable like deer and elk (hunting big game). Wolves should be managed with consideration to sportsman's contributions and efforts. Hunter opportunity should come first, before the wolf.

W204: I think there are plenty of elk and deer. I don't think FWP meets its management goals on deer and elk numbers so I don't see wolves as a threat. I do think they will make animals more wary. Wolves take the sick, weak, and young. I think the wolves have a niche.

W205: I don't think there are plenty of elk and deer and cow/calf ratios are down. I think we should manage the wolf the way we manage any other predator.

W220: A couple of generations ago, there were no deer or antelope in the north country because of wolves. Wolves kept deer/antelope down on river breaks. Deer/antelope numbers will decrease dramatically if we have wolves. Alternative 4 is preferred.

W492: Alternative #2. I am not sure I agree with 15 breeding pairs. Yellowstone has a lot of prey animals but outside of the Park in the rest of the state, I am concerned with the impact to elk and deer populations. Concern that mule deer population is dwindling so what will this do to that population?

W692: It has been proved that wolves have an incredible impact. Wolves do have a place – there needs to be a balance.

W702: I support Alternative 3, but if no compensation program, there needs to be clear standards for where wolves can be harvested by ranchers and landowners. While there may be impacts on elk herds, we've seen a decline in production where there are no wolves. This can be attributed to other factors like drought.

W741: I am concerned about bighorn sheep numbers in the Greater Yellowstone Ecosystem – will wolves wipe out the sheep in this area?

W765: Most predatory animal populations will fluctuate with the available prey base.

W861: You're going to get a lot of negative comments from hunters who are losing opportunity from wolves.

W936: Some of the prey population effects is due to wolves and some is not – we need to have good information.

W1019: Protect Montana lifestyle of hunting.

W1040: Reduce wolf #s when prey species # are down.

W1051: We focus on wolves where there are a # of other factors that influence elk.

W1095: Better to have wolves eat elk than elk starve to death.

W1124: State of Montana has lost interest in state animals. #s are going down and wolf #s are going to go up.

W1186: Too much emphasis on prey animals and not enough on habitat.

W1273: Spend more money monitoring prey animals rather than wolves.

W1308: Sportsmen are paying to feed wolves; prey impacts

W1339: Predator vs. prey … limit wolf numbers not hunter numbers.

W1447: We need hard data on predation, impacts on other predators.

W1: The more wolves we have, the less deer and elk we will have.

W20: 1. Base numbers of pairs on habitat availability. Protection is the key. Loss of critical winter range will have long-term impacts to ungulates. Predators serve to balance prey to available habitat. We should focus 10 yr attention to protect habitat. Montana can support at least 20 breeding pairs 2. Remove livestock from leased areas with a high probability of interactions with prey; allow for compensation program to be run by whom ever (i.e. private or public) There should be plenty of private funds to tap into if not , wolves are very marketable nationwide. Promote good husbandry techniques which would help reduce livestock loss to predators. Allow for a floating benchmark based on science/ research. 15-20-25

W43: 1. Must have a plan acceptable to Feds, or they won't delist. A lot of good folks have done good work here. 2. Emphasize need for permitted lethal control. This is the only way to gain their respect and make them avoid humans and livestock. Acknowledge that a predator-prey cycle exists and don't overemphasize population controls. Emphasize wild habitat. Try to talk some sense into Wyoming, or delisting won't occur.

W59: 1)#2. Current population large enough to tolerate significant control (i.e. pack removed or severe thinning in Paradise Valley, Sun River) and to significant importance elk and deer populations in Centennial Valley, Gardiner, and Beartooth Wilderness. We need to study, observe more before adding more breeding pairs. 2) Institute limited trophy hunting ASAP to increase value of wolf to ranchers, outfitters and hunters who are currently aware to the wolf.

W75: 1) Alternative #1. Due to lack of science studies to establish appropriate predator/prey ratios in given regions (biomes) 10-15-20 or whatever is an artificial number. Need more research. Gather studies or any research from Alaska, Canada, especially Minnesota, to help establish appropriate predator/prey ratios based on a given region/space. 2)I would support alternative #2 if there was no set number of breeding pairs required. Wolf populations should be based on established research/studies of seasonal/regional/prey variances. I would support #2 if all control measures were conducted/supervised by FWP. There should be no regulation by hunting/trapping.

W76: 1) #2 appears to be the most "balanced" approach. Wolves were here long before I was and will be here long after I am gone. They are truly a majestic animal, but must be regulated so as not to disrupt big game populations. Want to see hunting and trapping allowed. Thanks for the chance to comment. 2) Wolves in the Nine Mile valley don not act like wild wolves. They have been habituated to humans, thus showing little fear or concerns when encountering humans. I think that wolves attack/kill or injure pets (dogs including lion dogs, bird dogs) should be hazed or shot and killed just like livestock attacking wolves. I would like to see "hazing" allowed when wolves come too close houses, pets or humans.

W99: 1) Minimum wolf - alternative 4. 10 breeding pairs is an adequate number of wolves to assure future of wolf survival in Montana without severely damaging big game populations and decreasing hunting opportunities in the state. 2) Guarantee wolf harvest with hunting and trapping.

L0136: 1) Minimum wolf because I feel that any additional packs of predators would severely deplete game herds as well as giving government agencies the excuse to close more land. 2) I would tell the USFWS to butt out of Montana's affairs. Also public hunting and fishing license fees should not be used to fund any part of the wolf program.

L0043: I am in favor of leaving wolf management to the U.S. Fish and Wildlife Service to be protected by the Endangered Species Act. I don't think wolves should be hunted under any circumstances. They are important predators that help keep other populations of wild animals healthy. I don't think the loss of a few domestic animals justifies killing wolves. Please select the alternative in the Wolf Plan EIS that reflects these views.

L0172: This is the official comment of the Montana Shooting Sports Association (MSSA) concerning the "alternatives to wolf conservation and management" as examined in the wildlife agency's recently released "draft environmental impact statement". For the record, MSSA is the primary organization advocating the specific interests of hunters in Montana, with members in communities across Montana. Unlike some other special interest organizations, MSSA does not pretend to advocate for "wildlife", other than in the context of ensuring traditional and historical levels of hunting opportunity for MSSA members and the citizens of the state. That is, MSSA is clearly not a wildlife advocacy entity, masquerading as also representing the interests of hunters. MSSA is first and foremost an entity advocating for Montana hunters, and for continuation of traditional hunting opportunities in Montana. It must be recognized that hunting, especially hunting of big game animals, has always been a cultural imperative in Montana, and also a very significant component of the Montana economy. The economic and cultural effects of big game hunting in Montana are profound. The reintroduction and protection of the gray wolf must not be allowed to erode this cultural and economic base by significantly reducing Montana hunting opportunities. Correct but almost passing mention of this issue is made in the Executive Summary of the Draft EIS when it says: "Because of their long-term financial investments and willingness to restrict themselves when necessary, Montanans enjoy relatively liberal hunting seasons for more ungulate species than other western states. The financial investments and sacrifices made by the hunting public to restore ungulate populations are significant. Safeguarding those investments for present and future generations is an important priority for many of Montana's citizens and MFWP. MFWP seeks to

maintain the public's opportunity to hunt a wide variety of species under a variety of circumstances, and to do so in a sustainable, responsible manner." FWP must prepare a wolf management alternative that places this issue front and center, and which goes well beyond the near-footnote mention contained in the current draft EIS.

When crafting a wolf management plan for Montana, FWP must recognize that it is required to honor the political will of the people of Montana. The greatest confluence of interest concerning wolves in Montana is that common ground shared by hunters and stockgrowers. MSSA recognizes that the threats to tradition, culture and economy shared by hunters and stockgrowers have a significant overlap - our interests are very similar - that wolves must not be allowed to disrupt our traditions, culture and opportunities. We submit that the common ground shared by hunters and stockgrowers is the single greatest area of political interest concerning wolf reintroduction in Montana. Further, we submit that this collective interest is the dominant influence, and most nearly expresses the collective will of the people of Montana than any other. Also, MSSA wishes to remind FWP that it is hunters who pay the bills for wildlife management in Montana, and therefore, the collective voice of hunters must be given a commanding role in FWP management decisions that may have a profound effect on our traditions, culture and opportunities. Said differently, although wildlife advocates may be "interested" in the wolf issue, they are not true stakeholders in the way hunters are. No matter how wolf reintroduction is spun or explained, there is no escaping the reality that advocates of wolf reintroduction and subsequent wolf management have always envisioned feeding their pet project on the savings account of hunting opportunity that hunters have fostered with a century of effort and financing. That savings account is the current populations of huntable game. We insist that this raid on the savings account hunters have so long and carefully fostered be kept to the absolute minimum.

The historic mechanism by which the will of the people of Montana is properly expressed is through the acts of the Legislature. It is beyond choice and discussion that in crafting a wolf management plan for Montana, FWP must give full credence to the will of the people of Montana as expressed by the acts of the Legislature, regardless of anything else. In consideration of the foregoing, MSSA rejects all proposed alternatives for wolf management contained in the draft EIS, and recommends adoption of a new alternative that would most closely resemble "Alternative 4. Minimum Wolf" in the EIS. In addition to the management directives contained in Alternative 4, the new alternative would spell out the extent to which this alternative is required by controlling acts of the Legislature, as follows: HB 262 has been passed by the Legislature and signed by the Governor, and carries an immediate effective date. It is now controlling law in Montana. HB 262 requires that FWP manage large predators (wolves, lions and bears) to maintain hunting opportunities, protect livestock and pets, and for the safety of people. The mandate of HB 262 must be discussed in the new alternative as circumscribing, narrowing and limiting the focus of FWP in managing wolves. It must drive the wolf management plan. HJ 32 contains legislatively-approved terms of delisting and wolf management, especially including the definition of "breeding pair" of wolves for management purposes (one adult breeding male of any pack, one adult breeding female of any pack, and their pups less than six months old). This definition, the expressed will of the people of Montana via the Legislature, must be given special cognizance in the new alternative. More specifically, this definition must be stated as one of the limits of the new alternative. HB 306 will allow the people of Montana to vote on putting the right to harvest wild game and fish into the Montana Constitution. Although this right (encompassing the right to hunt) is not yet in the Constitution, it is highly likely that it will become part of the Constitution early in the implementation of any FWP wolf management plan. The new alternative should recognize this likely event on the horizon, and incorporate into the new alternative the intent to be in full compliance with this constitutional provision when it becomes effective. SB 209. Since one clear goal of the new alternative will be to protect and preserve traditional hunting opportunities, FWP will have an unarguable need for the best possible information about wildlife population numbers and trends. The performance audit of FWP game counting methodologies requested by MSSA and performed by the Legislative Auditor disclosed that FWP needs significant attention to improving its game inventory practices. SB 209 requires, essentially, that FWP disclose progress in compliance with audit recommendations. It is essential that the new alternative recognize the critical importance of accurate inventories of both huntable game and large predators consuming huntable game, so FWP may correctly regulate wolf populations in order to comply with the mandate to preserve hunting opportunities. In order for any Montana wolf management plan to be authoritative, it must be in compliance with superior law. That means that the alternative eventually adopted by FWP must be consistent with these acts of the Legislature. The new alternative prepared by FWP will necessarily be circumscribed by these acts, and not driven by public opinion polls, and not even by any perceived consensus of public comment concerning the draft EIS.MSSA will be very interested to see the new alternative that is drafted in compliance with the principles and legislative mandates iterated above.

L0083: Alternative 4 is my choice. I don't like the return of the wolves and what they have done. They have over killed the elk/claves in Yellowstone. They kill the deer/young deer and decimate them wherever they are. I feel that 100% federal funding since they are the ones that brought them to Montana but Montana should have all the say in how they are managed. We live here-- we should have a say. If Montana cannot have a say, then no federal funding. Can't you people pressure the feds to straighten out the mess the wolves are doing in Yellowstone National Park??? I would like to say this -- you have put wolves in an area that we have camped in for 25 years. My son who is now 25 years old grew up there and as he grew older we allowed him to go down the river fishing, looking for frogs, etc. As the situation is today, he couldn't go down the river or up the river without a gun for protection because of the wolves. After you let the wolves go there, you saw no deer there. We need to protect their areas that are such a joy to live in and view god's beautiful land that refreshes our souls which is why we went there for that many years. You shouldn't mess this land up with wolves.

L0089: Montana needs to manage its "alien" wolves now. These wolves should have never been "introduced" in the first place. I have personally observed on several occasions packs of 4-6 chasing deer east of Cooke City 25 miles on 50 or Chief Josephs Highway. Ranchers will take matters in their own hands and will now shoot wolves on sight. Fine with me. Would prefer an "open season" with bounty, but a wolf season will do. Time is now to start "cutting" the packs down to size by hunting, baiting and trapping. The future of other game is at stake, not to mention pets and cattle.

L0133: After a more detailed study of the wolf management plan, I am saddened by the proposed alternative. I honestly believe the document to be flawed, with the preferred alternative counter to Montana's game management objectives. Predation on big game populations is the greatest concern I have on the liberal approach to wolf management. There are only three paragraphs (Prey Populations) discussing the impacts on big game populations from Alternative 2. This discussion does nothing to attempt to quantify the expected impacts caused by the expanding wolf population. The Plan's writers sum in up by the following sentence which gives me no comfort "FWP would integrate management of predators and prey in an ecological proactive fashion to prevent fluctuations in both predator and prey populations" Now, really that's just a bunch of BS! How in the world can that statement lead to anything constructive? I want to know the best estimates as to the impact wolf numbers will have on each of the big game species. I want honest estimates so I can better understand what the future of hunting in Montana will be for me, my kids and grandkids. The plan suggests future action may be necessary to reduce pack sizes. Whoa! If the effort is to accept the expanding number of wolf packs and only remove individuals then it need to be re-evaluated! There must be a provision to remove entire packs and not just some of its members. Any reasonable person understands that removing one or more individuals from a pack will do little, if anything, to reduce the impacts caused by the pack. The cost for the monitoring/management effort scares me. Eight hundred thousand dollars per year for the wolf is high and is way understated. There will always be

another study because of some smart idea from the staff that just has to be conducted. Then there will be more staff needed. All of this money will eventually be the responsibility of the State to finance, probably through license fee increases. Once the State takes over, it is my bet that the federal government backs out of the funding but keeps pressure on the State to perform. The cost estimate is very conservative. What is the number of packs Montana needs? If we need a minimum of 10, then manage for 10!!! If we ever get short, and I seriously doubt we will, then we can add them very quickly as we all understand. Given the understanding of wolf population dynamics, wolves will take care of themselves: what we need is someone to look out for other species of wildlife. What is proposed in Alternative Two will cost vast sums of taxpayer's money to monitor/manage an animal that only needs heavy pressure to keep their numbers in check. The preferred alternative is costly, liberal in favor of the wolf, requires excessive government intervention and will have high negative impact on game resources in the State. My hope is that FWP will revisit the plan and write it in favor of protection of the wonderful game sources we currently have in Montana.

L0145: Some livestock loss to wolves is not reported. It does not do any too report to crooked US damage control people. I predict all hunting will stop in about thirty years unless the wolves are killed.

L0153: 1)It appears alternative #2 is the best of the ones presented. I would rather see the state manage the wolf population. The federal government only introduced them but does not properly manage them. 2)Funding is a concern. Given the current situation in this state where is the money going to come from? The federal government has to help with this. Prey management is a concern if necessary wolf numbers must be reduced, not hunting opportunities.

L0155: The need for the preservation and strong population of elk and game, which are being reduced by wolf kills, far outweigh the need for a strong population of wolf. Urge you to support and create a plan to de-list the wolf and preserve the other game animals that are more important to all.

L0166: A substantial decrease in elk and deer numbers caused by wolves can only lead to a decrease in hunters, which in turn will result in higher prices being required for tags, which in turn will lead to even lower numbers of hunters…..Has anyone given any thought as to what impact will have on communities and towns that depend on hunter revenue? The statement that "new" license revenue may be generated by implementing a regulated harvest program as a management tool "terrifies" me. What this indicates to me is that the FWP is already counting on revenue from selling wolf tags, and when this happens the goal of maintaining a minimum number of packs becomes secondary to that of maintaining a population viable enough to sustain a budget requirement for continued revenue. This is almost like a justification for higher wolf numbers at the expense of lower deer and elk numbers. I would favor alternative #4, simply because see no cap on the number of breeding pairs in alternative #2. Table 43 (pg 148) indicates a potential high of 54 breeding pairs in 2015. There is no way I can support this plan and it seems a bit underhanded to give lip service to 15 breeding pairs when in fact there is no cap. Should be entirely funded by the federal government. The state should not implement a plan which relies on revenue form the harvesting of wolves. In my mind this is a direct conflict with the management of deer and elk, for deer and elk numbers are going to be reduced in order to support a viable wolf population large enough to sustain a wolf hunting program. I find it hard to believe that an aggressive, federally funded program to limit the number of wolves to 13 breeding pair would be more costly than a program that would manage up to 54 breeding pair in 2015. Lets get real people. Plan should be contingent upon adequate funding by the feds, as they have knock for changing the rules whenever it benefits them. Don't see how a good plan can be developed without setting down with the other two states involved. Makes no sense for states to perhaps come up with diametrically opposing plans. I am sure Idaho and Wyoming wouldn't want to manage for the deficiencies or excesses of Montana's plan, and likewise Montana shouldn't have to do it for those two states. Plans that are compatible would benefit everyone.

L0191: I remain concerned that alternative 2 is unnecessarily liberal and encourage reconsideration of alt. 4. With a three state recovery area Montana's contribution to the recovery effort need no exceed 10 breeding pairs or 1/3 of the area goal. Adverse economic impacts would be minimized with lower sustained wolf population. Opposition from cattle producers would be minimized along with potential contention that may result between ranchers and sportsmen (landowner's proposal to withdraw from block management in "protest"). Somewhat deficient in its assessment of potentially adverse impacts to elk populations. 200 wolves consuming 7(?) elk apiece represents an economic impact that is not quantified in the EIS. Using a value of poaching violations, $1000 per elk, predation poses a potential economic loss of $1.4 million annually, lost hunter opportunities and revenues. Given Montana's rich and economically important hunting heritage, any serious threat such as a significant increase in predators deserves exacting quantification.

L0194: Wolf numbers should be kept lower than 15 breeding pairs until further study can be done to ascertain the impacts wolves are having on declining elk populations and depredation on livestock. Should not use state monies to manage. Craft a plan that is best for Montana hunters. I am disturbed by lower elk numbers.

L0197: 1)Alternative 4 is best. Wolf kills of elk calves and deer fawns is understated in your EIS. #4 is also more responsive to my concern over human safety and domestic livestock depredation. 2)You Under stated the extent of current wolf use of private lands (pg 137). The EIS fails to admit that wolves will significantly reduce elk and deer populations, rather you cite research which raises only questions. This failure cast doubts on the credibility of other conclusions or information presented.

L0200: 1)No mention of management on wildlife refuges which may border private agriculture land. High numbers of ungulate populations need to be lower to prevent attraction of large number of wolf packs. 2)Traveling wolves are not counted in the recovery process.

L0212: 1)#3 Maximum wolf. The ecosystem evolved with wolves and important part, weeding out the weak and the sick prey and stabilizing deer and elk populations and the result being genetically superior population of prey species. While wolves can become predators on domestic livestock, this problem should be dealt with by weeding out problem animals. 2)Stock predation on private land should be compensated for, by the government if private compensation is not available. Stock losses on public land would be considered part of the cost of doing business and some allowance for such losses should be recognized in determining grazing permit fees.

L0213: 1)#3 Maximum wolf. Wolves are definite plus for the ecosystem as a whole. Natural predators are better than hunters in improving the genetics of game populations. 20 breeding pairs (if not treated as a maximum) gives the wolves a better cushion against the predations of humans and the fluctuations of prey numbers. If there has to be a season on wolves it should be very tightly regulated, better would be specific elimination of problem wolves. 2)Stock losses on private land should definitely be compensated by the federal government if other sources are not available.

L0244: I concur with all the points of the MSSA. Alternative 4 does not go far enough in protecting our dwindling investment, nor consider the recently portent laws.

L0246: I concur with and support the MSSA. State agencies must align themselves and their policies with Montana state law.

L0253: In accordance with our belief that uncontrolled wolf populations will reduce big game hunting opportunities and our support for hunting as a multiple use on public lands, we vigorously oppose all of the alternatives, except alternative 4. We feel that there are already too many wolves in Montana. They must be controlled before their numbers get out of hand. It appears that wolf management may become very expensive. MFMU feels that we need to reduce the numbers of wolves in Montana until they reach a level that we can afford to control. Hunting will never work as a means to control wolves. Alternative 5 is not a contingency; it is a capitulation to federal power and a waste of money. MFMU believes alternative 4 would be more palatable to some, even though a declaration of the wolf as a predator or fur bearer may actually be more useful to Montana. The primary reason for choosing alternative 2 over 4 is a belief that Montana must comply with federal dictates of USFWS because of the ESA. In order to fulfill its obligation to citizens of Montana and manage wolves for the benefit of Montana, it may be necessary for the state to vigorously defend its wildlife management right both in court and in the media. It may be an expensive and lengthy undertaking. Nerveless it must be done because the only other option is a complete surrender of the right to manage wildlife to federal bureaucrats. If wolf populations are not aggressively controlled, big game populations will continue to crash and the purchase of hunting license will follow that trend. Before long MTFWP will depend almost entirely on Montana taxpayers for their funding. If wolf populations are not controlled in Montana, and soon, MTFWP will become irrelevant and unnecessary. MFMU completely supports the comments of Montana Shooting Sports Assn. regarding Montana wolf management.

L0256: 1)Alternative 4. 100% federal funding. I do not want my hunting license fee's to be used for managing wolves, which compete with me in the taking of wildlife. Wolves also threaten agriculture, which supports much of our big game. 2)Restrict wolves to Yellowstone and Teton Parks and Glacier Park. Any time they are outside the parks the wolf should be considered a predator, like the coyote. If FWP is going to continue to have good hunting FWP needs to control the number of predators.

L0264: We feel the reintroduction of the wolf severely threatens present and future hunting opportunities and would like to see wolves aggressively managed in order to minimize that threat. Concerned about the negative economic impacts which may occur throughout the state should hunting opportunities be diminished by wolf predation. We should support an alternative which will place management firmly in the hands of Montana FWP. We feel 15 breeding pairs is too many. Our membership is not interested in hunting wolves. Their primary concern is that ungulate populations remain as stable as possible. We support alternative #4 and support the provision that wolf distribution be restricted to areas where the least impact to livestock would occur.

L0277: 1) Alternative #3. This allows for more breeding pairs yet strong landowner flexibility in dealing with problem wolves. 2) State of Montana participates to some degree in the compensation program. I am an avid hunter and outdoors person and strongly support the wolves' place in Montana.

L0279: 1) Alternative #2 - Gives State of Montana the most flexibility to deal with wolves. Prey management balanced with predator management. 2) Maintain wolf numbers at present levels. We don't need any more wolves - When will elk and deer numbers reach their all-time lows? What will courses of action be when they do? Will hunters suffer first?

L0289: I have been in and up every drainage from Hungry Horse Dam down to the White River. My best areas where game was always around have little to no deer and elk anymore. Elk were completely gone and every deer track we saw had wolf or lion tracks following them. I fly an airplane and have been unable to find herds of elk the last three years where they usually are. The Spotted Bear area is saturated with wolves. I agree with the MSSA position on the wolf EIS.

L0308: It is most difficult finding an alternative that is correct for all Montana residents and businesses. We believe alt #2 comes close as any with the exception of a couple of amendments. Central Montana's #1 resource is agriculture and with hunting a very important second. We as constituents of central Montana are very adamant that we do not want wolves established in central Montana. We feel that it would be detrimental to central Montana's economy to let wolves establish here. This action would devastate our already depressed agriculture and hunting based economy. We as landowners would be forced to remove most of the land from the state block management program and privately owned average from public use to protect further predator depletion of our domestic and wildlife animals that presently utilize this habitat. We realize that it is critical that we get the wolf de-listed and feel you can do this under alternative #2 with these exceptions: You establish a zone for wolf population. Give landowners more flexibility in the central and eastern zones. We have enclosed a map. Wolves should not be allowed to establish themselves east of this line. We would like to see wording in alt. 4 page 91 added to alternative #2. Wolf distribution would be artificially zoned so that wolves would be strongly discouraged in central and eastern Montana and may in fact be routinely trapped and relocated to western Montana or removed from the population if suitable release sites cannot be found. Wolf presence in region 4 and 5 should only be allowed in the areas on our map. The administration, delisting language from alternative #4 should be added to the eastern zone on our map for alternative #2. We believe that resolution #6-2003, drafted by Fergus, Petroleum and Valley county speaks for the agriculture and hunting constituents of our central Montana area.

L0320: Urge you to adopt alternative 4 to keep the wolf pack in check. I would like to see a few elk, deer, sheep left for my grandchildren.

L0335: If we only have 10 packs in the state, which is not correct, the math adds up to 2,400 head of elk killed per year by a 10 member group of 10 packs. That's a large herd of elk which will take years to recover, if ever. These numbers do not indicate any of the known deer, moose, mountain sheep or buffalo killed annually; nor the livestock highly impacted in the agriculture system. With this information I am recommending that you limit the packs to the minimum allowed to keep them delisted and no more. Limit the pack size to 10 members and list wolves in general as predators with no regulation except the existing minimal required packs.

L0344: 1) We support alternative #2 primarily because it gives the state control, provides compensation, allows for hunting, trapping and gives landowners flexibility. Also it is very important that wolf numbers and management takes into account moose, elk, deer and antelope numbers. We feel alternative #5 should be perused in the interim. 2) Changes we should like to see are: Compensation for all pets killed by wolves whether it is a horse, dog, cat, etc. But particularly for working stock dogs. Should be funded from general fund, as well as other public and private sources.

L0352: 1) None of the alternatives are acceptable, #4 would be the minimum. The least wolves the better. They are decimating our wildlife in record numbers. They weren't endangered in the 1st place. It was just a make more government jobs. Why don't you represent the hunter and fisherman who pay over 62% with their license fees? If there were too many elk in the park why not transplant them to other areas, like the Flathead and Bob Marshall? You would've been backed 100% - but no - you didn't stand up for our rights just your jobs! 2) Pay compensation to rancher, full market value for the size of animal would have sold for when grown. Make the wolf lover pay the bill. Maintain a hunting/trapping season. Keep the feds out and do your own management. But Feds should pay most of the costs - it was their program to start with and crammed down our throats. Please stand up for our wildlife and the people who are paying your salaries. Show some guts and tell them to take the wolves back east someplace if they love them so much and kill out their wildlife.

L0050: 1) Alternative #3 more wolves promote healthier big game populations. They also create a more diverse scavenger community. More wolves generate tourism dollars unlike livestock industry which is dependent on government subsidies for its survival. More wolves fill a vital ecological niche that was destroyed because of cow ranching. 2) Manage wolves like other wildlife such as elk, bear and mountain lion. Provisions for killing of wolves by citizens should be clear and specific. Funding must be assured before the plan is finalized. Key areas of wolf habitat should be protected during the opening season, large areas must be maintained for both wolves and their natural prey free from disturbance by people.

L0063: 1) #2 with some changes. 2) I would have no more than 15 breeding pair. We need to see if the elk population can handle 15 breeding pair. A study should be preformed to see if the wolf is the reason why elk population is falling. The federal government should pay for the wolf program. They pushed this on us. That would make both pro wolf people and people against wolf pay for the program.

L0072: 1) I prefer alternative #2. It allows the wolf to exist and at the same time recognizes the rights of the hunting community and livestock owners. 2) Hunters must have the right to hunt the wolf as any other big game animal. Owners of livestock, pets or hunting dogs lost to wolf depredation should be compensated.

L0077: 1) Alternative 3 addresses my concerns because 20 breeding pairs seems adequate - 15 is not enough. FWP management will ensure efficiency. Prey and predator management is important, moderate approach. 2) What exactly are the flexible tools for landowners? What percent of funding will be covered by public sources? Will there be compensation for livestock conflicts to landowners? How will FWP address local concerns?

L0084: 1) Alternative 4. I don't like wolves and what they do. They have over killed elk/calves in Yellowstone. They kill the deer/young deer in areas they are in that I and my family love to camp. You don't see deer when the wolves are there. 2) 100% Fed funding. But shouldn't have to comply with federal laws only - We live here, we have the say not the feds. Can't you pressure the feds to straighten out the Yellowstone mess?

L0096: 1) Alternative 4, lowest number of wolves, federal government pays, Montana citizens wouldn't be taxed for the expenses, Montana sportsmen would not be assessed in license fees, game populations would remain the largest, would FWP manage wolves as well as they have managed flathead lake salmon. 2) Put wolves evenly throughout the state as there is as many deer in eastern Montana as western, require all 50 states to have at least 10 breeding pair, who made the decision that only 10 breeding pair are necessary?

L0103: 1) Alternative #2. I do not necessarily agree with all the specifics, but I do think this plan is the one most likely to get approval from the federal government, and the sooner wolf management is under state control the better. 2) I think the number of breeding pairs is too high. I also feel that the effect on elk populations specifically should be taken very seriously. Many Montana citizens make their living as outfitters and/or guides. These people take pride in and care of their elk populations, and that should not be destroyed.

L0130 1) Alternative 2. 90% of the funding coming from federal, the rest from the state or private org. Wolves need to be managed and this seems to be the best. 2) I am concerned about deer and elk populations in certain areas. Its going down drastically, will anything be done or will it be allowed to be wiped out and the wolves move on. I'm concerned FWP will not move fast enough to do anything significant.

E42: 1. The Manhattan Wildlife Association a non profit organization of over 1000 members mostly made up of Montana Hunters and Shooters would like to endorse the Montana Shooting Sports Associations position concerning the Wolf EIS. 2. As described in the letter from the Montana Shooting Sports Association Thank You.

E49: 1. The preferred or updated version thereof. 2. I don't think adequate attention has been paid to the give and take of micromanagement of game species vs wolf. I think it imperative that we incorporate mechanisms to reflect holistic game management. For instance if elk plan management objectives can not be achieved in an area and wolves are documented to be the primary cause the adjustments should not be to the elk side of the equation forever. There needs to be a specific mechanism left in place to be able to adjust both sides of the equation....wolves or elk. Specifically we have worked for years to build an acceptable age structure in the bulls segment of the Sun River herd...a work in progress. If in fact wolves have a seriously negative affect on that effort I think we need to be able to tweak our wolf management to accommodate those desires. We don't want to simply give up opportunities for elk in trade for non-opportunities for wolves. In an area like Sun River with wilderness herds that are historically low production with an already full compliment of predators we can not be painted into a corner where wolves are the dominant management species. And at some point we must have permits on surplus wolves!

E78: 1. I support the implementation of Alternative 2 – Updated council (Preferred Alternative). This is a thorough and solid plan that I believe will ensure the persistence of wolves in Montana while adequately addressing the potential environmental and social impacts of a recovered wolf population. 2. Please consider the following comments in regards to the draft wolf environmental impact statement: 1. In the section titled Prey Populations it is stated: "If reliable data indicate that a local prey population is significantly impacted by wolf predation in conjunction with other environmental factors FWP would consider reducing wolf pack size." Given that prey populations naturally fluctuate in response to a variety of different environmental and biological conditions I believe that it is important that you clarify what is meant by "reliable data." Of course it is reasonable to believe (and has been shown) that prey populations have declined due to predation and in some cases wolf predation may serve as an additive factor. But predators are often the first to take the blame for perceived declines in prey populations and significant pressure is often put on managers to control predators in these instances. Indeed predators are easier to control than the weather or disease. But ecosystems are complex and it is often difficult to tease out the effects of predation on prey populations even after multi-year studies. I foresee wolves often taking the blame for declines in prey populations and therefore highly recommend that FWP clarify what kind of data are going to be used to sort out this issue. 2. In the section titled Livestock/Compensation I have

2 issues to address regarding 1) identification of individual problem wolves and 2) use of selective removal methods. In the 4th paragraph it states: "Management actions will be directed at individual problem wolves." Although this is a logical approach it has proven difficult under USFWS management to identify individual wolves involved in livestock depredations. Attempts have been made to identify problem wolves but many control actions have resulted in non-selective removal of wolves from implicated packs. Also in paragraph 4 it states that: "Non-selective methods such as poison would not be used." No mention is made of aerial shooting of wolves as a potentially non-selective method and this needs to be addressed. Aerial shooting of wolves has been one of the primary control methods used by WS but I would argue is one of the most ineffective and non-selective tools to manage depredating wolves unless the goal is to remove the entire pack. I believe the best long-term strategy for managing depredating wolf packs is to attempt to create a control situation whereby remaining pack members may learn from the event. Packs that undergo partial removal by aerial gunning do not experience any learned behavior in associating depredation behavior with the removal event because control often takes place away from the depredation site. I believe the concept of learned behavior needs to be taken into account in how lethal control is carried out because aerial shooting of wolves is extremely expensive and a waste of state and federal money unless conditions do not permit an alternative option. Therefore due to the combined problem of properly identifying problem wolves and conducting selective removal I recommend the following approach to lethal control in situations where livestock are kept in confined pastures (most private land situations). 1.) If problem wolves can be identified then aerial shooting may be an acceptable option. 2.) If problem wolves cannot be identified then the first step should be to issue shoot-on-site permits to the affected landowner(s). If the landowner shoots a wolf or wolves on his (her) property then this situation has the potential to create a situation whereby the rest of the pack learns to recognize the area as unsafe while at the same time enabling the landowner. This method is also less expensive then using WS to conduct control. 3.) If the landowner does not want the shoot-on-site permit but still wants wolf removal or if the shoot-on-site permit does not result in the taking of a wolf but depredations continue then WS should initiate trapping operations on the ranch or attempt to shoot wolves on the ground (example: shooting wolves that return to carcasses at night). 4.) If #2 and #3 fail then initiate aerial shooting operations. When depredations occur on public lands I recommend the following approach to lethal control. 1.) If problem wolves can be identified then aerial shooting may be an acceptable option. 2.) If problem wolves cannot be identified then control should consist of trapping around the carcass or shooting wolves that return to the carcass at night. This assumes there is enough of a carcass remaining that it is likely that wolves would return. 3.) If #2 fails then initiate aerial shooting operations or issue shoot-on-site permits to livestock owners. 3. In section titled Livestock/Compensation it is stated (7th paragraph): "Considerations leading up to removal of wolves include persistent wolf activity evidence of wounded livestock the likelihood of additional losses if no action is taken evidence of unusual attractants and/or intentional feeding of wolves." The way this is worded makes it sound like "evidence of unusual attractants and/or intentional feeding of wolves" could result in the removal of wolves. I do not think (hope) this is what was intended by the statement. This should be rewritten to clarify that "evidence of unusual attractants and/or intentional feeding of wolves" may result in decisions to NOT remove wolves. 4. I am very pleased and supportive of FWP's proposing $50 000 annually to be allocated to "efforts to reduce the risk of depredation and implement more proactive management strategies." In the Livestock/Compensation section there was mention of WS potentially helping with these proactive efforts. I believe that this is INTEGRAL to a successful proactive management program and would recommend that FWP include this as part of their annual contract with WS to ensure their involvement.

E79: 1. FWP preferred alternative. Big game hunting in Montana is an important economic asset for our state. The wolf population is a heavy determining factor on game numbers and hunter success. FWP is the best equipped agency to determine the best wolf/game balance. 2. I would like to have the fewest wolf packs possible for the benefit of the game population. After all there is a very good reason the wolf was eliminated in the past.

E82: 1. One of Montana's largest dollar based business is hunting. I am in favor of alternative No. 4. If there was a choice for going back to the way it was prior to the introduction of wolves that would be my choice. Montana needs to take control of it's own destiny and protect the hunting heritage that we have today before it is to late. There has already been a reduction in hunter opportunity in the hunting districts around the park and it wont be long before it effects other parts of the state. 2. Delist the wolves and let the state of Montana regulate them with no help from the fed's.

Funding

Summary of Comments: These comments address wolf management costs, sources of funding, and the reliability of funding in the future. Many comments indicate strong support for federal funding to cover 90-100% of management and compensation costs. Other comments support using a diversity of funding sources; a subset of these comments are concerned about "strings" or "agendas" being attached to the funds. Some comments strongly oppose FWP using any revenue generated from the sale of hunting or fishing licenses for wolf management. Some comments say that the FTE and operating expense estimates are either (1) too inflated or excessive or (2) too low to implement the program. Many comments agree with FWP and the Council that having adequate funding was a caveat to the State of Montana assuming management authority. Some comments give ideas for generating revenue to support the program (e.g. sale of wolf license plates, surcharge on entrance fee to Yellowstone and Glacier national parks, establishing a means to accept private donations etc.).

Response: FWP agrees that supplemental federal funding is needed to implement the program. In fact, Montana, in conjunction with Idaho and Wyoming, has been preparing a budget request for eventual submission to the U.S. Congress to support grizzly bear and wolf management in the tri-state area. FWP recognizes that a diversity of sources may ultimately be required to fully implement the program, which may include license and matching federal revenues on par with mountain lion and black bear management supplemented with private sources. FWP has not precluded any sources of funding, including tourism, special license plates, or surcharges to national park entrance fees. FWP is also aware of and shares the public's concerns about the long-term reliability and adequacy of federal funding for state programs. The Wolf and Grizzly Bear Trust Fund concept originated out of those concerns. That concept is still under consideration and

is being worked on as the long-term funding source. In the meantime, the three states are seeking special annual federal appropriations due to the immediate funding needs in the near-term.

FWP also agrees with the comments that it is important to have adequate funding in hand prior to implementation. FWP clearly recognizes that the public has high expectations for improved agency responsiveness, more reliable information on wolf population size and distribution, and improved agency public outreach, compared to the level of satisfaction in the current outreach efforts expressed by the public. FWP strongly believes that adequate funding and FTE's are critical to accomplishing the work and being responsive to local concerns. FWP does not believe it can meet the public's expectations nor implement a sound wolf management program successfully without additional funding and FTEs. FWP believes that adequate funding and FTE's are also important so as not to degrade or erode efforts in other important and popular program areas. FWP made reasonable, good faith estimates of what it thought would be required to implement the program in its entirety and to represent the programmatic nature and sometimes "hidden" costs of administration. While the budget in the Draft EIS did not account for overhead or inflation, the formal budget request to Congress (for the next five fiscal years) does include overhead. The requests do not incorporate inflation because these adjustments will be incorporated for each annual request in subsequent years. While FWP (with Idaho and Wyoming) will still pursue the concept of a trust fund as a long-term funding source, FWP is also working with Idaho and Wyoming officials to obtain annual appropriations for the next three to five years while continuing to work on creating a trust fund. The budget in the Final EIS was amended to reflect what FWP will be requesting from Congress for wolf management in the near-term.

FWP thanks the public for providing ideas on how it could generate revenue to support wolf conservation and management activities at the state level. FWP is willing to work with interested parties to explore these options in greater detail. FWP will be putting concerted effort into securing adequate funding for implementation of the state program after this step of the planning effort is completed and while the USFWS completes the administrative steps for delisting.

Representative Comments:

W8: It is going top be expensive.

W19: I want to see outside interests share the cost.

W30: We want federal, but not federal control.

W33: Concerned with who is paying and why.

W76: Don't need to spend a disproportionate amount managing predators.

W79: Passionate hunters are about wildlife, as long as there is a prey base to satisfy hunters; the money will be there. Hunters need to be strongly represented in the equation.

W92: State should not do plan unless reds fund program.

W93: National interest -- should be paid nationally.

W125: $800,000 seems reasonable for annual budget.

W129: Cost will be 2x more than $800,000.

W161: State needs a method to generate money and have money before we implement the plan so we don't start in a deficit.

W162: Money should not come from hunters. Park Service should have a surtax generated for wolves from wolf viewing.

W206: I am president of the Western Montana Fish and Game Association. Our group doesn't support license dollars being spent on wolf management. USFWS should pay for the program.

W217: Private funding should be sought –not public funding. No alternatives address this.

W295: Hunting opportunity?? If yes, then okay to spend some state $.

W298: Contact congressmen.

W299: Endowment for wolves would include ecosystem management and private property interests.

W334: Too much money going to administration and not enough into the on the ground problem.

W354: Since the federal government introduced wolves why should the state have to pay any money to fund management? The feds should pay up the money.

W378: Establish a tryst fund with federal money, using only the interest.

W382: If wolves are bringing money in, then the money brought in should help pay for it.

W383: Tax on wolf paraphernalia for supporting wolves in Montana.

W388: Hunting will generate revenue.

W444: Management cost $800,000 will be small compared to compensation costs.

W464: Lean towards #4 because it is fully implemented with fed dollars. Whey should we be paying form them?

W477: Regarding funding: State of Montana shouldn't have to pay. People who supply funding should not have increased influence on how wolves are managed.

W478: Spread funding out to people who want wolves.

W498: Concerned about federal funding, PILT results – under funded. Fed's have a great reputation for that.

W513: See if we could earmark funds from the bed tax for wolf/grizzly management and/or compensation.

W520: Irregardless of which alternative is selected, the funding structure should be based on which government entity is responsible. The amount of funding from each is based proportionally on the level of management responsibility.

W528: If we use private funding sources it would involve private interests. Should be public funding; want people of Montana, Idaho, Wyoming to have the most say; should be state funding only.

W553: Federal Government doesn't tend to fund ongoing projects.

W573: If private sources involved in funding they can't dictate policy.

W608: If you can't sell wolves, you can't sell anything don't believe public money needed; private funding would sell.

W666: Concerns about delisting without $$ in place; Alternative #2 is best choice, overall allows wiggle room; good management choice.

W682: Tie funding to non-consumptive use.

W683: Montana needs to be responsible for some of the funding.

W699: Do not mind if my money goes into supporting animals that are not hunted.

W700: Recognize that sportsmen money support non-game species.

W703: Also support #3; if we use sportmen money, there is a sufficient population for a hunt.

W715: Funding form management – money should be in place before implementing the plan.

W717: YNP fees – a source of money for management?

W720: Shifting any money from existing programs in Montana is almost impossible.

W723: Hunting guides with FWP personnel for guided wolf hunts to raise money.

W735: Have you thought about ways to capture revenue from "watchable wildlife" type programs to fund wolf effort and create a constituency to support the program.

W736: Could there be income tax check-off to help fund wolf management or tax certain items?

W737: Sportsman and livestock producers oppose having to fund wolf management; other environmental groups that are so heavy into supporting wolves should have to foot more of the bill.

W749: I would support a nongame license plate to support the wildlife.

W751: A wolf visitor center could be used to help raise money and educate people about wolf conservation.

W783: I don't think I should have to pay for it.

W835: Can't support any of the until funding sources are cleared up! Funding has to be clarified.

W869: If you have federal $$ in management, then you have federal control over management. We want state funding or program and state control.

W883: Up the grazing fees on public lands to pay for the program.

W884: Let PETA pay for it.

W919: Everyone , photographers, watchers, etc. should pay for wolf program … tax check off etc. Everyone who enjoys wolves would/should pay.

W924: Licenses fund program – wolf funded from hunting and trapping wolves.

W986: From what I hear, it's going to be better to have them under state control. If you don't have the funding, are we better off where we are now?

W988: I think it's important that /senators Baucus and Burns be consulted to see how then can help us get this funded.

W1049: Better spend money management wolves than on compensation.

W1066: Should have no state $$ in any plan. Montana residents should not have to pay for a federal problem. The whole nation should pay.

W1109: I think a fee of $1 per car should be assessed for management. I would be happy to pay for it if it meant compensation without the right to kill wolves. I'm happy to give money for management but not for management that involves killing.

W1110: Funding and personnel needs have to be addressed to adequately manage a wolf harvest.

W1112: I hope that this wolf management program does not become a burden on the people of Montana. It should be federally funded.

W1172: Likes state involvement, but we have to pay.

W1234: Absolutely wrong for general license dollars to go to wolf management. Ok for wolf license money though.

W118: I like Alternative #5. Deals with where money is coming from, but don't like the numbers. Montana should take a greater share of the expense and responsibility. I am concerned about the distribution of wolves, not just a blanket number.

W1238: Concern about where the funding is going to come from. Whoever provides funding is going to want some control -- especially private sources from out of state.

W1300: Alternative #4 if appropriated money (federal) did not show up it would be a problem. Work funding in ahead of time … more stable; Stable no matter what alternative is important.

W1302: Money is my biggest concern. Alternative #2 is fine.

W1334: Support alternative #2 even with removing what now -- there are still good wolf numbers. All should pay to stay involved. Delist and move to trophy animal.. Harvest leads to appreciation. Hunting leads to a voice in management. No sudden increases in n8mbers.

W1356: Program funding – before delisting, Montana needs funded plan or it's not viable plan. Need funding decision before management decision.

W1357: Of state wants management control – state must pay; federal money = federal program.

W6: 1. If given enough time and enough wolves they are sure to eat someone's grandchild going to the school bus or playing or whatever kids do. 2. Don't spend money that is needed elsewhere to protect or manage wolves.

W11: #2 – the problem is FUNDING. With no committed private or public funds at this time, no alternatives will be functional. Montana and other states are in dire economic stress and I see no way to get anything going. The ability of the state to manage wolves is not the problem. It boils down to "bucks".

W34: 1. Alternative #2 – most local control and accountability. 2. Funding should come from public sources only!! Public action reintroduced wolves into state. Historical problems were well documented and federal government and public assumed this risk.

W39: 1. 2 or 3. I would like wolves, so 3, but I think 2 is a good plan. Plan needs: compensation program, adaptive management for local populations. High value on wolf as a big game trophy; innovative funding; wolf startup with tourist tax, private foundations etc.

W44: 1. None. No plan has been implemented to totally control the wolf and the expense is given to the taxpayer. Wolves will kill wildlife as well as domestic livestock, which will dramatically affect agriculture and the financial stability of the sate. 2. See hunting permits to fund the state costs and finance any damages to domestic livestock.

W46: 1. No's 2 or 3. 2. Feds should fund 90%.

W83: 1. Combo of alternative #2 and #4 (more aggressive management approach). 2. Don't manage for a single species. Sliding scale on number of breeding pairs. Figure out funding mechanism prior to management plan implementation. Don't let outside interests dictate how Montana manages a wolf program.

W88. 1. Number 5 then number 2. 2. I'd like to see Montana's part of the 10%/90% cost share increase.

W96. 1. I favor alternative 3 as I value more wolves in the environment and would like them mostly left alone. The greater number of pairs would help insure survival and livestock owners need to care for the animals appropriately to avoid predator loss. 2. full funding should be assured before plan is finalized. Wolves should only be killed when they clearly pose an immediate threat to livestock. Provisions for citizens killing wolves must be clear, specific and limited.

W110: 1. No 2. 2. FWP needs to manage wolves in order to manage deer, elk, and moose. Fed government to fund compensation program. 2. Needs federal funding. After all, federal government mandated we have wolves; some private funding is ok if you can find it.

L0054: Some pointers to remember that should happen before any changes are made to the wolf population. 1) Funding of the state program must be assured before the plan is finalized. 2) Provisions for when citizens are allowed to kill wolves should be clear and specific, permitted only when wolves pose an immediate threat to livestock. 3) The minimum number of breeding pairs should be at least 20, as outlined in Alternative 3 of the draft plan, to assure long-term survival. 4) Wolves should be managed like other wildlife, such as elk, bears and mountain lions, with no artificial limits on wolf numbers or boundaries. Remember people travel long distances to see wolves -especially foreigners. The wolves have as bad reputation caused by greed of the cattle ranchers over the past century. But the wolves can have a positive impact. They will promote healthy big game populations; generate $20 million in tourism (NPS); manage coyote and other predator numbers; and, they really only cause less than one percent of all livestock losses annually (Montana Agriculture Statistics Service). Plus the Defenders of Wildlife pay ranchers for cattle attacked and killed by wolves.

L0085: My concern is for a workable long-term wolf conservation. Pleas develop a plan that includes funding of the state program. Provisions for when citizens are allowed to kill wolves should be clear and specific, permitted only when wolves pose an immediate threat to livestock. The minimum number of breeding pairs should be at least 20 and wolves should be managed like other wildlife with no artificial boundaries or limits. Montana is a great area as its wolf population makes it even better. Thank you for assuring a future for wildlife.

L0121: Even though Alternative 2 does not fully come into agreement with me- it comes the closest. The other alternatives are filled with issues too controlled by the federal government this forcing one to choose this alternative. Number 2 is the least restrictive with some issues I'll comment on. I feel our MFWP can manage and address the wolf management concerns well with out federal intervention. My two biggest concerns with Alternative 2 are in the area of funding and wolf harvest. I don't know where all our funding will come from but hopefully huge money groups such as Ted Turner, Defenders of Wildlife etc. will not be allowed to influence our people in FWP or at the legislative level. Possibly the wolf tags for hunting and trapping would generate monies strictly for wolf management/harvest. Due to constant monitoring needed to appease pro-wolf groups there'd be a demand for extra funds. Why not have a "Wolf" license plate for the state of Montana so that those who so desired to support wolf management whether for hunting, trapping, sightseeing could support this with all the monies to go to the wolf management program. Similar to the park plates. It would be desirable to have wolf education programs to educate the public with documentaries showing all aspects of the wolf- birth to death. But tell the whole truth not just the fuzzies about them. There's a need to get on with our program NOW by also classifying the wolf as a furbearer OR big game animal. I could see the lack of doing this delaying our de-listing by months/years! There definitely needs to be a regulated wolf harvest on the Alternative # 2 not leaving the word possible there.

L0186: Any wolf on private property or livestock allotment can be killed by livestock owner or anyone he or she authorizes. They can be listed or game animals on public property with no special license fee or no limited season. Their only safe haven in state and national parks. As for compensation for livestock loses, actual or suspected. The general public, who allowed their reintroduction will assume full responsibility for reimbursement at full market value. Also the cost of administrating the program will be in the hands of those wildlife and environmental organizations that pushed reintroduction.

L0203: I would advise caution in depending on long term availability of federal financing support. Some mechanism be set up to assure continuous funding form FWS with protection against the effects of inflation. If federal funding does disappear, it behooves MTFWP to have the prerogative to shift the management back to the FWS - somewhat like the situation provided for under alternative 5Too often the fact that federal funds are also derived from taxes tends to be overlooked.

L0247: Forgive me for waiting until the last day to comment...spring gardening and wrapping up a school year consume me. I attended the meeting in Whitefish a few weeks back, and was impressed by the quality of the presenters and civility of the attendees. My comment card was such a mess, I had planned to write a nice long letter. Instead here is a quick list:
1) I am comfortable with the concept of the state taking over wolf management, AS LONG AS funding issues have been thoroughly addressed. This still needs federal dollars, because it is a federal priority. 2) I like alternative #3 the best
3) Hunting could be considered in the future, but not trapping! 4) Hold landowners accountable for "best practice" ranching.
5) Keep management in the hands of the professionals, not the politicians. 6) Consider wolf habitat and prey base a "higher and better use" than human use. Wolves can't go to Safeway when they don't get their elk. Again, thank you for a job well done.

L0299: We fear that no wolf control guidelines are adopted, we could loose significant number of cattle to predation. FWP must be able to control the number of wolves. Livestock owners or private citizens whose person or property are threatened must be able to kill wolves without threat of prosecution. Animal control officers must be able to quickly kill offending wolves before they kill again. The number of breeding wolves must be kept to a minimum. Cost to manage wolves should come form the federal government and pro-wolf groups, not the state of Montana.

L0322: Updated Council version of the wolf plan seems to be the most logical approach. Wolves should be delisted now, as a healthy population exists. Hunting of wolves should be allowed, with changing annual quotas dependent on current populations of wolves, deer, elk, and moose. Manage wolves as mountain lions are managed. Fees collected by the state of Montana for wolf permits/licenses could be used to help pay the cost of annual data collection on wolf, deer, elk, moose populations. Other costs related to wolf management should be paid by U.S. Fish and Wildlife Service, as it was a

federal program, not one requested by the voters of Montana. Livestock owners should be able to protect their livestock before there are losses and should be compensated for losses. There should be authorities (federal and state wildlife people) available in every county that has wolves, so they can respond immediately when there is conflict with wolves.

L0058: 1) Alternative 2 gives FWP the more flexible manageable tools to manage wolves in the future. 2) Sports and landowner and property owners would have a say in the development of compensation. Federal agencies to pay their share in the future.

L0080: 1) Alternative 1 because the breeding pair benchmark set in the other alternatives is arbitrary and capricious. Given the size of MT and amount of potential habitat, 15 packs is too few. There is no scientific justification for this number. 2) Develop compensation program. Assure funding.

L0082: 1) Alternative 3. This program seems to allow a greater opportunity to control wolves with more hunting opportunities as well as ensuring wolf recovery. Also it seems to have a greater recovery option in case of over harvest etc. 2) Allow the sale of permits to help defray cost of the program.

L0098: 1) Best is #5 because I'm concerned Montanans will be negatively affected by increasing wolf numbers and distribution due to lack of management if wolf not de-listed quickly. Would also support #4 and #2 in that order. 2) My biggest concern is that rural Montanans, the majority of which oppose wolf populations on their private and leased lands, are being required to pay the entire price, in money and in cost to lifestyle, while the majority of pro-wolf are out of state and country, people who pay nothing. Please work on a system to get pro-wolf people to bear the cost.

L0102: 1) Alternative #2 because it allows farmers to deal with them if needed and the cost is okay. 2) Alternative 5 federal government covers 90% and state of Montana covers 10% and put that on alternative 2.

L0111: 1) Alternative 2 - The 15 breeding pair benchmark is sufficient - 10 is too little, 20 is too many. I also appreciate the ability of the landowner to respond to conflicts. It is essential for the wolf to be delisted as soon as possible. 2) I feel once the wolves are delisted which provides for landowners to protect and defend private land there should not be a compensation program. Any type of a board or committee that would oversee losses and determine the "worth" of that loss creates a no-win situation. It will be difficult enough for FWP to financially manage the wolves without the added burden of raising money for compensation of losses.

L0120: 1) #4. I think federal compensation should be available for livestock. 2) Ten breeding pairs is more than enough wolves. Federal government should bear all cost of wolf management program.

E54: 1. I can live with Alternative #2 the choice of FWP. However it will be criminal if one cent of FWP revenue obtained from hunters is used to manage wolves. The people of the whole US are the ones who decided to import wolves at a high cost to those same taxpayers. Now wolves are here and thriving. These same people should foot the bill. Wolves are already reducing hunting opportunity particularly for elk. Do not expect elk hunters to pay the bill. 2. The alternative should clearly state that the federal government would pay for all costs related to wolf management. If the federal government won't accept that condition then let them deal with the wolves. FWP should bow out at that point. The federal government created the problem let them deal with it. Spend our Montana money protecting livestock and the big game herds the wolves prey on.

E91: 1. I support Alternative 4. I believe this alternative more accurately recognizes the economic impact wolves have had on agriculture hunting and other land based businesses that have formed Montana since its statehood. While expensive I believe a program similar to the National Park Service's fee-demo program would fully fund both management and compensation to livestock producers. If all visitors to Montana's national parks/landmarks/national wildlife refuges (including Yellowstone National Park which is in all 3 recovery states) were assessed a wolf management fee of $2-$5 Montana would not have to pay for management. Remember it is the public that wanted wolves in the first place. It is my belief that this public were largely visitors to Yellowstone National Park and Glacier National Park. Make them pay for recovery. 2. In developing alternatives I believe Montana spent a lot of time developing alternative 2 but relatively little time in developing alternative 4. I would like to see alternative 4 integrated with many of alternative 2's characteristics including flexible management hunting and restitution. I think the final EIS should recognize that there are many packs not yet located or found. For this reason while alternative 4 sets a 10 pack minimum there are probably at least 5 more packs undiscovered. I believe every effort should be made to ensure that there is not an excluded zone surrounding Yellowstone National Park where kill permits cannot be issued or wolves cannot be harvested by licensed hunters/trappers. I don't think we should continue to count packs by pack numbers. We need to devise a more realistic method of counting wolves. Many packs when in wildlife rich areas generate 2 or 3 litters a year. Thus a pack can sometimes have 25-40 wolves. This could be the size of 5 or more smaller packs. Also by current pack standards a pack consists of an Alpha Male Female and two pups of the year. Often when alphas are killed another beta animal steps in as Alpha. Thus by counting wolves rather than packs we more reasonably ensure the number of wolves.

Livestock

Summary of Comments: These comments relate to Montana's livestock industry and wolf-livestock conflicts. Some comments note a desire to be able to protect livestock and defend private property if a wolf is threatening livestock. In addition, many comments support the availability of kill permits to individual landowners experiencing conflicts with wolves. On the other hand, some comments raise a concern that the phrase "threatening to kill" could be vague, too lenient or liberally interpreted – resulting in limited checks on human-caused wolf mortality. Similarly, some comments want all non-lethal methods of deterring wolves exhausted prior to any lethal control. One comment points out that FWP did not develop and analyze the impacts of an alternative that only incorporates non-lethal management tools. Some comments suggest that lethal wolf control should come as a last resort in resolving wolf-livestock conflicts and only when human life is in imminent danger. Some comments support the ability of livestock owners or their agents to defend livestock on public land grazing allotments similar to private land. In contrast, other comments opposed any lethal wolf control on public lands and suggest that lower grazing fees already take an increased risk of predation and this is a fair

exchange for livestock grazing on public lands. A few comments point out the difficulties of successfully identifying individual problem wolves and question whether or not specific conflict management tools could really "select" the problem wolf. Some comments questioned the definition of "livestock."

Some comments say that a disproportionate amount of time and or effort is being directed at addressing wolf-livestock conflicts when wolves are only responsible for 1% or less of all livestock losses. Comments generally support and welcome increased effort to minimize the risk of depredation to the extent possible and collaborating with landowners on preventative measures. Some comments want "best management practices" established prior to a livestock producer gaining eligibility for compensation in the event of a loss. A few comments say that the Draft EIS is deficient in analyzing the impacts of ranching or livestock grazing on public lands.

Response: FWP acknowledges that gray wolves have harassed, stressed, and/or killed domestic livestock. FWP also expects that will occur in the future. The preferred alternative describes a management program that is intended to minimize risk, to work collaboratively with all interested parties to prevent depredations to the extent possible, and to resolve conflicts swiftly and efficiently. A companion program element addresses some of the economic losses through a compensation program. Indeed, one of the main objectives of the Wolf Advisory Council was to address the concerns expressed by the agricultural community. Those concerns are addressed through the adaptive management framework described in the preferred alternative.

Despite overall industry loss figures, FWP recognizes that wolves could disproportionately affect some livestock producers because of proximity to wolf activity, livestock type, or the behavior of a particular pack. FWP is also aware that a "refuge" may exist for some packs because part of the pack's territory overlaps national parks or national wildlife refuges where lethal control work would be highly unlikely. Tolerant private landowners could also create refuges. FWP is committed to working with individuals, industry groups, and federal authorities to lessen these effects.

FWP acknowledges the difficulty experienced by USFWS and USDA Wildlife Services in successfully identifying individual problem wolves involved in livestock depredations. Wolves are highly mobile and may be miles away by the time a depredation event becomes known. Wolves may or may not return to a carcass. FWP also acknowledges that certain control methods may not successfully target individual problem wolves. Resolution of wolf-livestock conflicts is a complex challenge due to the wide variety of husbandry methods and circumstances in which livestock are raised (e.g. large public land grazing allotments in mountainous terrain, small private pasture near human dwellings, large private ranches with remote pastures away from human activity etc.). It is further complicated by the behavior patterns and high mobility of wolves. Each situation will need to be evaluated for its unique characteristics prior to selecting a course of action.

An important aspect of an adaptive management program is monitoring and evaluating the outcomes of management decisions. Evaluating outcomes of management and control responses to wolf-livestock conflicts will be critical to identifying and correcting shortcomings or erroneous assumptions. FWP will need to improve its understanding of the various proactive strategies, wolf deterrents, and control tools prior to taking over responsibility for wolf management. The expertise of the USFWS and USDA WS will be important. FWP will also rely on the experience of livestock producers, other interested parties, and the published literature to improve its knowledge.

FWP is aware that the phrase "threatening to kill" is vague. The Wolf Advisory Council discussed this issue on many occasions and had difficulty defining what constituted "threatening" wolf behavior towards livestock with any degree of consistency from one scenario to another. FWP agrees. In Montana statute, "threatening to kill" is the same standard that applies to black bears and mountain lions in the context of defending livestock or property. Citizens do not appear to have interpreted that standard too liberally for black bears or mountain lions. Black bear populations appear to have at least maintained themselves and mountain lion populations have increased in both number and distribution with suitable prey availability. Whether or not wolf populations would be adversely affected under this standard remains to be seen. However, given the higher reproductive potential and dispersal capability of wolves, FWP is confident that corrective measures taken by FWP and the FWP Commission could mitigate or reverse any adverse effects if too many wolves are killed under the "threatening to kill" clause. FWP always has the ability to make more conservative decisions through the adaptive management framework in other aspects of the program if the wolf population approaches the relisting threshold.

In the experimental, non-essential population areas where livestock producers have had the latitude to kill wolves caught attacking livestock, relatively few wolves have been taken. Even with a "shoot on site" permit, livestock producers and

their agents report that killing a wolf on the permit would be an opportunistic event. Nonetheless, FWP is aware that human-caused mortality is the leading cause of death among wolves in the northern Rockies. The key to maintaining a viable, recovered population is adequate regulation of human-caused mortality. FWP will consider the need to provide more specific guidance on interpretation of that clause, but will provide additional information to the public on wolf behavior. A formal definition may be adopted during subsequent rule making through the FWP Commission that could be based on wolf behavior or legal standards of evidence for "threatening" conduct such as documentation of previous depredation complaints or injured livestock.

FWP will make a concerted effort for public outreach in working with landowners and livestock industry groups about what management tools and options exist in the state's wolf management program, especially in areas outside current wolf distribution. The reader is referred to pages 76-82 of the Draft EIS for specific information. In particular, the passages describing provisions of SB163 (MCA, 87-3-130) which will guide actions by private citizens are discussed in detail. There is also a discussion of how the management approach for wolf-livestock interactions fits together with the compensation element.

FWP did not develop and analyze the impacts of an alternative that incorporated only nonlethal management tools. MEPA requires FWP to describe and analyze reasonable alternatives to the proposed action, including the "no action" alternative. "Reasonable" alternatives are those that are practical and/or feasible from a technical and economic standpoint, using common sense. In this case, the most conservative alternative (No Action) is the continuation of the existing federal program, in which lethal control is one management tool along with non-lethal tools. The federal ESA is the most conservative legal framework in which to conserve and manage species. Federal officials have found, even in that most restrictive of legal frameworks, that lethal control is warranted in some circumstances and permitted under the federal rules so long as it enhances species recovery. FWP included the combination of lethal and non-lethal management tools in all the alternatives because USFWS management experience has demonstrated that having both sets of tools available is important to addressing and resolving conflicts, which in turn enhances species recovery and maintenance. The adaptive management framework of the preferred alternative provides the decision maker the flexibility to use lethal or non-lethal management tools but directs him or her to take an incremental approach to address wolf-livestock conflicts. The incremental approach is guided by wolf numbers, depredation history of the pack, and location of the incident, as well as whether the presence of unusual attractants or intentional feeding of wolves may have preceded or otherwise contributed to an increasing potential for conflict ultimately warranting lethal control.

This EIS analyzes the impacts of a FWP wolf conservation and management plan. Administration, oversight, and regulation of livestock grazing on federal public lands are beyond the scope of this EIS process and the jurisdiction of FWP. FWP is not the appropriate agency to conduct an impacts analysis of ranching or livestock grazing. FWP can offer expertise to any analyses conducted by the agencies with the appropriate jurisdiction.

For the purposes of wolf management, the preferred alternative proposes to define "livestock" to mean cattle, sheep, horses, mules, pigs, goats, emu, ostrich, poultry, and herding or guarding animals (llama, donkey, and certain special use breeds of dogs commonly used for guarding, protecting, or herding livestock. This list is already consistent with Montana statutes (MCA 36.25.145, 32.5.101, and 15-1-101). FWP may adopt this definition through formal rule making at the FWP Commission level.

Representative Comments:

W112: Want to know specifically what landowners can do to respond to conflicts.

W176: I like the idea of rewarding livestock growers to prevent problems.

W178: I am concerned about the ability of people to lethally control wolves that are threatening livestock or pets.

W189: I don't think they should be able to use lethal control for threatening livestock.

W200: Benchmark seems more like a limit. I question if hunting wolves is necessary in general. I think wolf numbers will be controlled enough through depredation actions.

W227: A lot of environmental groups would like to get domestic livestock off public ground and wolves are just a tool to achieve that.

W238: 90% of problem with wolves would be eliminated if farmer could be able to shoot them.

W242: How long will it take to get someone to come down if wolves are killing livestock?

W272: Cows are easier to catch than deer.

W330: The plan is flawed because in the real world, game limits number, but here livestock provide unlimited food source.

W367: Like to see protection or compensation when livestock are on allotments.

W400: kill permits for landowners good in alternative #2.

W412: Alternative #4 – why should landowner have to worry about controlling wolves? They're in the cattle business.

W454: When wolves get into stock, they are stirred up and hard to work. There are mot costs than just killing stock. Sometimes have to replace some animals.

W537: I like Alternative #2. I like the idea that Montana will be running the show rather than the feds dictating. I like giving stock owners the tools to handle problems.

W557: Once removed from federal list, don't think farmers and rangers should be able to shoot.

W602: Landowners lose more livestock to coyotes than wolves.

W732: Would like to see more non-lethal research similar to burros/llamas to prevent wolf livestock conflicts. I don't want to see any more restrictions or closures. Should not go too far.

W779: Alt. 4. probably the best. If breeding pairs go below 10, they should not be put back on the endangered list. Leave tools the private landowner has now intact (snares, traps, m44s, shoot).

W799: Standard predator proofing don't work against wolves.

W811: Concern about the difficulties associated with killing a w9olf if they go on private land. What do I do about these circumstances? Do I have to have a confirmed kill (if I have a permit). Makes me nervous. Alternative #2 is good, but it needs to be clarified.

W819: Something I like is a kill permit for producer. I would like to see that on first offense. Similar to bears and lions—little time to wait. Specific instances where kill permit would have saved time and money.

W826: I like Alternative #3 the best with the addition that the state would develop a compensation plan. But I think #2 is most reasonable because it balances the need of having wolves in Montana and the landowner and livestock owner's needs.

W833: Any management of wolves should not affect control of other predators and m44s should not be restricted.

W974: How will the issue of a wolf kill be addressed and will it be addressed in a timely manner?

W1130: Calves/cows losing poundage; depredation isn't the only issue; life span of cows from stress – and it takes time out of your day. Open cows at 5 or 6 years

W1168: Use non-lethal means of wolf control – donkeys in sheep herd.

W83: When game populations are wiped out, they will turn to domestic livestock.

W1276: Landowner has ability to deal with livestock depredation.

W1292: Give landowner the option to protect livestock and they will give up compensation; threat related.

W1333: Ranchers should be allowed to shoot when attacking livestock.

W1341: Don't' want rancher to have to wait for wolf to have lame in its mouth before shooting. Alternative #2 is good for rancher involvement.

W1360: Livestock conflicts – all alternatives need to better define when things happen when you can harass, shoot. Etc… How close is close? How threatening is a threat? Use examples to help define.

W1394: Within the EIS – need to specify that livestock includes horses. Need to be able to handle problems/dangers to horses like other livestock.

W1439: Need prevention programs to assist ranchers.

W1463: Proactive measures to reduce livestock losses.

W16: 1. Wolves should be removed from the Federal lists but I don't believe farmers should just have a free range shot on them for interfering with their livestock, because it wouldn't only be farmers. It would be random punks shooting them because they know they could get away with it. Especially since wolves are wild animals which also need to eat much like humans. Yes they highly affect livestock but their wild and it's their instinct.

You can't actually help them from attaching livestock. Can't train them not to touch livestock. Wolves shouldn't be hunted! If they allow them to, sooner or later they'll be endangered.

W19: 1. Number 3 provides for a stable recovery and management system. A regulated hunt can be used if appropriate. FWP monitoring experience is more limited. Habitat connectivity is restricted; 2. 20 pairs should be a floor not a ceiling. State plan funding should be in place before implantation. Need clear standards on when wolves can be shot for preying on livestock. You should not permit it when they are just in the vicinity of livestock.

W23: 2. More education to the general public on researching alterative ways of raising livestock in order to decrease the losses. I want to see more science -- are the benchmark ##s ecologically viable?

W24: 1. Alt 2. Best mixture of addressing concerns related to wolf management in Montana. Best attempt at resolving wildlife and livestock depredation by wolves while ensuring a viable wolf population on a sustained basis. 2. Nothing. In fact, if any significant modifications are made I might not support Alt 2.

W36: 1. Alternative #2 because it fits the general population of MT better than the other alternatives; 2. I think the compensation part needs to be really defined. It needs to be more friendly to the livestock producer.

W58: 1)Alternative #3 - It provides for more packs in case of extinction of some packs. Gov't officials have had to kill entire packs in the past. If a couple of packs have to be killed off due to livestock predation, we will still have enough packs left for a viable population. 2)Should include a government and private compensation program.

W77: 1) Alternative #2. This does not spend disproportionate amount of money on wolves, other species are of concern and need to be managed. It monitors a viable population and allows livestock protection. 2)If livestock owners are allowed to kill and haze to protect their animals why should they still get compensations? Why 15 pairs? Couldn't a reproductive value be more accurate?

W90: 1) Alternative 2 because it will be treated as a species in need of management. I like that they will be monitored. But also that the landowners have flexible tools to respond to conflict and decrease risks. 2) Thanks for involving the public!

W95: 1) I value and respect all wildlife. Alternative #3 minimum breeding pairs more than or equal to 20. Assures long term survival. Make people responsible. I live in the Nine-mile. Pleas stop slaughtering wolves and grizzlies. 2) Funding of state program must be assured before plan is finalized. Must have clear, specific provisions when citizens allowed to kill wolves, permitted only when wolves pose immediate threat to livestock. Manage wolves like other wildlife- no artificial limits, boundaries.

E0043: I am in favor of leaving wolf management to the U.S. Fish and Wildlife Service to be protected by the Endangered Species Act. I don't think wolves should be hunted under any circumstances. They are important predators that help keep other populations of wild animals healthy. I don't think the loss of a few domestic animals justifies killing wolves. Please select the alternative in the Wolf Plan EIS that reflects these views.

L0132: I travel to Montana frequently to observe wildlife, particularly wolves, and am concerned about wolf management in Montana. Recovery goals should be based on a viable, self-sustaining wolf population; not on an artificial cap. Promote improved livestock husbandry practices to decrease the chance of conflicts with wolves. Livestock operators should keep livestock away from active den sites, remove ill and injured livestock that would be susceptible to predation, and remove carcasses to prevent scavenging and habituation by wolves. Do not allow lethal take of wolves for "threatening" livestock or pets. Non-lethal deterrents should be exhausted before allowing wolves to be killed, especially on public lands. Penalties for illegal killing of wolves should be strengthened. Establish a state wolf management advisory council for conflict resolution and public education.

L0145: Some livestock loss to wolves is not reported. It does not do any good to report to crooked US damage control people. I predict all hunting will stop in about thirty years unless the wolves are killed.

L0154: We are in favor of delisting the wolf and then letting ranchers use whatever means to protect their livestock.

L0186: Any wolf on private property or livestock allotment can be killed by livestock owner or anyone he or she authorizes. They can be listed or game animals on public property with no special license fee or no limited season. Their only safe haven in state and national parks. As for compensation for livestock loses, actual or suspected. The general public, who allowed their reintroduction will assume full responsibility for reimbursement at full market value. Also the cost of administrating the program will be in the hands of those wildlife and environmental organizations that pushed reintroduction.

L0196: I prefer number 4. The mental stress upon a rancher should be considered.

L0212: 1)#3 Maximum wolf. The ecosystem evolved with wolves and important part, weeding out the weak and the sick prey and stabilizing deer and elk populations and the result being genetically superior population of prey species. While wolves can become predators on domestic livestock, this problem should be dealt with by weeding out problem animals. 2)Stock predation on private land should be compensated for, by the government if private compensation is not available. Stock losses on public land would be considered part of the cost of doing business and some allowance for such losses should be recognized in determining grazing permit fees.

L0220: I realize a middle of the road approach is best. Grazing on public land and livestock lost, just the risk a rancher must take. If a wolf is on private land and wolf kills livestock, that wolf should probably be destroyed. Should the wolf be delisted? If it helps the wolf's PR then yes, if it doesn't, then my answer is no.

L0225: We oppose delisting of the wolf and support the no action alternative. What few livestock they kill can be paid for.

L0229: We support alternative 3 because it sets the number of breeding pairs at 20 before changing management strategies from conservative to liberal, provides full legal protection for wolves and sets clear and specific rules for when citizens can kill wolves that are threatening livestock.

L0275: McCone County will pass a resolution declaring that the wolf is an unacceptable species. Development of alternative 2 did not go far enough in protecting the livelihood and lifestyle of the eastern Montana ranching community. FWP is reliant on the hunters who pay the license fees, which in turn pay for Montana's wildlife. Will support alternative #2 with language from alternative 4 added to improve the alternative. We believe a cap at a minimum number of breeding pairs and social groups above the delisting level should be adopted. We also b believe that wolves should be zoned out of eastern Montana. And off private property with more management and control carried out by landowners should the wolves cross out of their zoned areas. No wolves should be introduced or recovered in areas east of FWP region 4 and 5. Special kill permits should be granted automatically whenever a wolf preying on livestock has impacted a landowner. Livestock producers in eastern Montana have already been skeptical of FWP and fear that breeding pairs of wolves may already have been or will be slipped into their area with no public information. Many of FWP's programs are dependant on landowners' support and participation. We urge you to keep on whether the language discussed above is or is not included in the preferred alternative.

L0281: Valley Countys' #1 resource is agriculture with the revenue our businesses receive from hunting not far behind. Alternative 2 is 15 breeding pairs which, with the maps provided, could be easily accomplished with where the wolves are located now. We are very adamant that we do not want wolves established in Valley County. We have been told that if you allow wolves in Valley County, landowners will pull their acreages from the Block Management program. Landowners who allow hunting have said they will close their property to all hunting. We realize it is critical that we get the wolf delisted and feel you can do this under Alternative #2. Establish a zone for the wolf population. Give more flexibility for central and eastern counties. Wolves should not be allowed to establish themselves east of this line. A much more stringent management plan should be in place for breeding pairs that migrate. We would like to see the wording in Alternative #4, page 91, added to Alternative #2. Wolf distribution would be artificially zoned so that wolves would be strongly discouraged in central and eastern Montana and may in fact be routinely trapped and relocated to Western Montana or removed from the population if suitable release sites could not be found. Wolf presence in Regions 4 and 5 should only be allowed in the areas on our map. However, individual landowners would carry relatively more responsibility for management activities on private lands in lieu of agency response compared to Alternatives 2 and 3. FWP will provide as many special kill permits as possible to interested landowners for wolf control actions on their private property. Pat Sinclair will still respond to wolf-livestock complaints, provide technical assistance to landowners, and aid in restricting wolf distribution to western Montana.

L0287: The Montana Stockgrowers Association (MSGA) currently has the following three policy directives on wolf management:
1.Ensuring livestock owners are able to defend their animals from wolf attacks
2.Immediate delisting from ESA with state management and adequate funding provided by the federal government
3.Livestock owner's ability to control wolf depredation on federal lands in a manner similar to that permitted on private lands.

With the previous policies in mind, MSGA reviewed the range of alternatives and compiled the segments of different alternatives that coincide with our policy.

Table 30 on page 102 of the document gives a comprehensive summary of the alternatives and Table 43 on page 148 is useful for future environmental consequences. MSGA used these tables to determine which segments of alternative #2 and alternative #4 best address livestock industry concerns.

Under Wolf Management and Distribution, alternative #2 identifies the trigger of 15 breeding pair as the benchmark for the technique that will be applied to control the population. MSGA feels that this trigger should have some flexibility, under the discretion of the FWP Commission. If it is determined that wolf depredations reach a level higher than expected before the trigger is met, the Commission should have the ability to adjust this benchmark to react more quickly. Distribution of wolves need to take on more of the properties of alternative #4. Wolves should be encouraged to stay in the western portion of MT and the population that expands into eastern MT be more aggressively managed. Alternative #4 also states that more management and control will be carried out by landowners, this language should be included into #2, but in conjunction with MDFWP.

Under the section of Funding, our policy states the need for adequate funding from the federal government. This would be achieved through either Alt. #2 or Alt. #4. The balanced approach under Alt. #2 seems reasonable; however, MSGA is concerned that the private sources or contributors may interject views on management that are not consistent with the direction intended by the people of Montana. MSGA feels your agency should continue to pursue the idea of a trust fund for the tri-state area to manage all large predators. The possibility of adding a $5 surcharge on the National Parks to create a fund would generate sufficient dollars spread across a broader range and not place an undue burden on the citizens of Montana.

The Livestock section needs more emphasis on allowing more liberal special kill permits and Wildlife Services more latitude to address wolf/livestock conflicts. The MDFWP may not need to go to the degree of permits that risk the population dropping below designated objectives, but liberal enough to address these problems quickly and efficiently. Funding for preventative initiatives should also be addressed. On page 78, it is stated that "some funding could come from monies FWP already provides to WS for animal damage management in cooperation with MDOL." The funding currently provided to WS for predator control would not be sufficient for both programs, so additional money would have to be allocated to address the wolf management.

The Wolf Habitat, Connectivity and Land Management section relates back to wolf distribution. By placing more efforts toward containing wolf populations in western MT, it will continue to allow a habitat corridor by which wolves will be able to disperse into the tri-state area and Canada, and reduce the wolf/livestock conflicts in the eastern part of the state.

Compensation needs to be included in the adopted wolf management plan. MDFWP is best positioned to act as the coordinator for the development of a compensation plan. It is stated in Alt.#2 that no FWP or Montana general fund money will be used to fund a compensation program, but it is essential that your agency take the lead in setting up the program and secure an adequate source of funding to cover the anticipated losses that will occur.

Economics and Livelihoods in chapter 4 are similar under all of the alternatives where it is stated that "estimated losses are small compared to the entire industry, not spread evenly among all producers and the losses may be significant in proportion to the size of the operation." The MDFWP must be prepared to accept the liability if these losses are too great and force an operation out of business. The ranching industry operates on a thin margin of profit and livestock producers forced to absorb these significant losses may have no other options.

The Information, Education and Public Outreach segment of Alt.#2 would be much more beneficial if the language of "increased interaction with landowners to notify when wolves are in the area" was included as stated in Alt.#4. To reduce costs, the MDFWP would not necessarily have to contact each and every landowner in an area, but relay the latest information to the local game warden or county commissioners. A simple phone call to a central location that could be accessed by the public may help in reducing the number of wolf/livestock conflicts. This improved communication will increase your agency's credibility and mitigate any costs associated with this undertaking.

Monitoring was not adequately addressed under Alt.#2. Although the USFWS is the lead agency in monitoring the wolf population in Montana, their accuracy in documenting numbers is questionable. During one of the open house meetings this spring, a MDFWP employee stated that

the documented population was 183 wolves; however, the number may be closer to 300! This type of discrepancy is not acceptable as management becomes the responsibility of the state. Telemetry, although expensive, will be an important tool in determining an accurate count of the wolf population. Because the entire preferred alternative is tied with the control techniques and the number of breeding pairs present in Montana, monitoring will be the key to success.

MSGA would also like to comment on the proposed budgets for MDFWP to manage wolves. All of the proposed budgets are within the $800,000 range and have deviated very little from the original 2002 draft wolf plan. MSGA still feels that the additional 4.3 FTE wildlife division staff and the 2.5 FTE enforcement staff are not warranted. The MDFWP may need one additional biologist to address the new responsibilities of wolf management, but current MDFWP biologists should be able to incorporate the presence of wolves into the management of the species already under their supervision. Also, there are current enforcement officers already in place to address fish and game violations, if your agency feels the enforcement division is not adequate, MDFWP needs to research funding for additional positions through other sources. Within Alt.#2, MSGA feels it is important to redistribute additional funds toward preventative efforts and depredation. By reducing the hiring for suggested positions, more funding can be allocated to reducing wolf/livestock conflicts and when conflicts occur, have adequate funding to quickly address those conflicts.

All of the time and effort put forth to develop a management plan by the state of Montana may be put on hold while the court system sorts through the lawsuits and appeals and for this reason it is important to include Alt.#5. MSGA feels it is reasonable to have a "fall back" plan to allow for the transition to a full delisting of wolves. MSGA is concerned that if the MDFWP is required to adopt this alternative, your department and the USFWS joint management will remain well into the future. It would be detrimental to our state if your department got caught into a management effort similar to grizzly bears, MSGA has contended all along that the MDFWP should have sole responsibility of management of wolves.

In conclusion, thank for the opportunity to comment on the Montana Gray Wolf Conservation and Management Plan. MSGA believes through continued cooperation, a workable management plan can be developed and the delisting process can be completed.

L0290: I am a landowner and livestock producer in Petroleum County, in central Montana and I am vehemently opposed to having wolves running loose anywhere in our state, and especially in my backyard. Wolves are high-powered killing machines which is the reason they were eradicated by the early settlers in our state. I consider wolves to be absolutely unacceptable anywhere in the State of Montana with the exception of Yellowstone Park. Allowing wolves to repopulate the State of Montana is completely irresponsible. I fear that having one of the wolf management alternatives rammed down our throats will cause MFWP/Landowner relations to seriously deteriorate. Successful programs such as the Block Management may suffer. We must continue to work together to manage the wildlife of Montana in the best interest of all citizens, not just the vocal minority pushing reintroduction of the wolves. Please consider that my land, my livestock, are more to me than just a way of paying bills. It is my livelihood; a way of life I hope to pass on to the next generation. I trust you to listen objectively to all comments, and to make a reasonable and informed decision on this matter.

L0295: We urge MFWP to consider and adopt alternative #4. We are extremely concerned with the impact of the growing wolf population. We would rather have seen a continuation of existing numbers of the wolves before reintroduction, but since that isn't a choice we have alternative #4 would be better than the other choices available. Limiting the wolf pairs to 10 might give a fighting chance to sustain the elk, sheep and deer populations. In the history of out state it has been proven that wolves are predators that devastate wildlife populations and the surrounding ranches and their livestock. How can this be a good all-around plan? Being a good steward of our land is an important job worth doing well. Please consider limiting wolves.

L0299: We fear that no wolf control guidelines are adopted, we could loose significant number of cattle to predation. FWP must be able to control the number of wolves. Livestock owners or private citizens whose person or property are threatened must be able to kill wolves without threat of prosecution. Animal control officers must be able to quickly kill offending wolves before they kill again. The number of breeding wolves must be kept to a minimum. Cost to manage wolves should come form the federal government and pro-wolf groups, not the state of Montana.

L0309: Indian Butte Cooperative State Grazing District does support resolution #6-2003 made by the Fergus County Commissioners, which prohibits the presence, introduction or reintroduction of wolves within the boundaries of Fergus county. IBCSGD is involved in the block management program and a wolf population in Fergus County would affect our decision to continue in the program. Some of our pasture allotments include 5000-10000 acres and it would be impossible to keep our cattle from becoming prey animals. In order to make a profit in present day ranching, it is very important to keep every possible cow, calf and bull alive. This area of Fergus County is abundant with antelope, deer, elk and other wildlife. A wolf population would adversely affect this wildlife population. The income form hunting and tourism would drop drastically.

L0310: Alternative 4 of the FWP plan would be the best option we have. For most folks that have reached maturity, they fully realize that the entire wolf reintroduction plan was a gross mistake an remains a bugling mess. Since they have re-introduced as great expense, the problems have been numerous and any measure of success is not in evidence anywhere. Wolves have been recognized world wide as the most cruel of predators. It is only a matter of time when they will have to be removed once again because there is nothing in the entire re-introduction program that is really working. The only effect this program has on the ecology has been without good effect. The sooner this program is downsized the better off all taxpayers will be. Sometimes we must step backwards to make progress. Ranchers and others effected have enough problems without such a whim being imposed on them.

L0313: Every wolf pack that has come in contact with domestic livestock has eventually had conflicts resulting in direct or indirect losses to those livestock. Since the perpetuation of Montana's wildlife depends on the habitats of Montanans private lands we feel the following criteria must be incorporated into the wolf management plan for Montana. Wolf numbers must be the absolute minimum to satisfy relisting the wolf. Recognize the wolf is a predator and livestock producers must have the right to protect their livestock on private and public ranges, using preventive and reactive methods. Damage caused by wolves must cover confirmed ad probable kills and also all indirect losses form wolf conflicts. Compensation is not acceptable and should not release those responsible for the accountability of reintroducing the wolf and the damages caused by their actions. Management of the wolves should be directed to maintaining the minimum number of packs to prevent re-listing and also establish a maximum number of packs Montana has to tolerate and provide wildlife and livestock as its prey base.

L0322: Updated Council version of the wolf plan seems to be the most logical approach. Wolves should be delisted now, as a healthy population exists. Hunting of wolves should be allowed, with changing annual quotas dependent on current populations of wolves, deer, elk, and moose. Manage wolves as mountain lions are managed. Fees collected by the state of Montana for wolf permits/licenses could be used to help pay the cost of annual data collection on wolf, deer, elk, moose populations. Other costs related to wolf management should be paid by U.S. Fish and Wildlife Service, as it was a federal program, not one requested by the voters of Montana. Livestock owners should be able to protect their livestock before there are losses

and should be compensated for losses. There should be authorities (federal and state wildlife people) available in every county that has wolves, so they can respond immediately when there is conflict with wolves.

L0324: I support your proposed alternative 2 with substitutions from alternative 3. Fifteen breeding pairs are too few. Please consider increasing this minimum number to no fewer than 20 breeding pairs per federal recovery definition. This would also help offset illegal killing of wolves. I can live with the shooting of wolves (big game animal status) albeit with grave concerns regarding decimation of this species' social structure, as we did with coyotes. But I strongly urge you to NOT allow trapping (furbearer status) of wolves. Please delete trapping by other than wildlife management professionals from acceptable methods of controlling wolf populations and/or problem animals. The 72-hour reporting requirement when a wolf is killed or injured in defense of life or property SHOULD be shortened to the federally required 24 hours. Kudos for increasing efforts to reduce the risk of depredation and implement more proactive livestock management strategies. This is long overdue. Adequate funding needs to be in place BEFORE this plan can be implemented. If funding becomes insufficient, compensation for livestock losses should be the first item to be cut. Special kill permits for livestock producers should NOT be issued to remove wolves on public land regardless of wolf numbers being high or low.

L0332: We already have enough adversities in this area and are really not really willing to add another problem for our livestock and abundant wildlife that is already in place here. We would be in support of alternative 2 with the following changes: Support 12 breeding pairs where they were originally introduced. Suggest that wolf distribution be strongly discouraged in central and eastern Montana and may be routinely trapped and relocated to western Montana or removed from the population if suitable release sites could not be found. In favor of individual landowners carrying more responsibility for activities on private lands and the FWP providing as many special kill permits as possible to interested landowners for wolf control actions on their private land. In favor of WS responding to wolf-livestock complaints, providing technical assistance to landowners, and aiding in restricting wolf distribution to western Montana.

L0334: We are in favor of it coming off the endangered species and going to state authority. It is a devastating predator to our industries in eastern Montana - our livelihood involves chiefly cattle, sheep and horses. It is extremely hard to make ranching pay the bills now without fighting wolves. Also it will be a tremendous loss to hunting, as the wildlife numbers will really diminish with the wolf coming in. Probably most of the hunting areas will be closed off to hunting if this happens. It will most certainly affect the economy of the county because more and more ranches will have to go out of business. Keep them out of central and eastern Montana. West of the mountains is OK, but please keep them away from us.

L0340: 1) Wolf management should be under Montana state control only as we are the people directly affected by them. Consequently it will be more expedient to handle problems ourselves. 2) There should be NO difference between private ground and federal ground when problem wolves need to be removed. Meaning livestock producers can kill problem wolves on leased, BLM, Forest Service etc ground.

L0341: 1) Alternative #2. 2) Needs provision in the plan to address wolf control for those counties that do not use Wildlife Services. There are at least 5 counties in the state that do not use federal predator control.

L0117: 1)Alternative #4 minimum wolf is best. Why? 1-less wolf-livestock conflict. 2-less wolf-human conflict. 3-federally funded versus sportsman's dollars. 4-decreased predation of big game herds ensuring stable big game license sales. 5-decreased stress on big-game herds on winter range at the end of a harsh winter. 6-better protect sensitive ungulate populations of bighorn sheep and moose. 7-increaced recruitment rates due to higher calf, fawn, and lamb survival rates. 8-increased hunt opportunities, outfitter business, and other economic benefits. 2)I support the position of the Montana Shooting Sports Ass. Concerning the wolf management EIS. It is imperative that MFWP adopts a plan that represents those groups who have born the costs of wildlife conservation in this state -- Montana's hunters and stock growers. The final plan. Most similar to alternative 4 minimum wolf, must reflect the intent of our state legislature and be consistent with HB262, HB306, HJ32 and SB209 and preserve Montana's hunting heritage,

L0030: 1) Alternative 4. Estimates in other plans on livestock losses and wildlife reductions (elk & moose) are too low. Funding from Montana should be less than 10% or the same % as the population of Montana is of the US. 2) I would increase the breeding pairs to someplace between 15 and 20. Confine the wolves to National parks and wilderness areas as much as possible.

L0064: 1) I prefer alternative #3. It allows immediate protection of private property. Allows hunting and trapping of wolves and allows more wolves available for hunting, trapping and will bring more revenue. 2) NA.

L0069: 1) Alternative #3. I like this alternative the best due to the larger benchmark of 20 breeding pairs. In addition having to the comment meeting in Gardiner I realize that ranchers want to have some tools and abilities to respond to conflicts. 2) I would prefer that if the state and landowners are given the permission to kill or hunt wolves that trapping would be disallowed. I feel that trapping is unnecessary inhumane. Also I don't believe that wolves should be killed in order to protect cattle that is grazing on public lands.

L0101: 1) Wolf should remain on federally threatened list. Let FWS manage wolves. Let the people who study wolves have the biggest say how wolves should be managed. Let stock growers who graze on public land pay for wolf up keep. If they graze on public land, they get no compensation, that's the price they pay for doing business on public land. 2) Full implementation public and private. Livestock belong to individual and companies but wolves belong to all Americans so let the government fund the wolves. Do not pay anyone that build a home near forest and public land for their pets. If they want to live in the wild they have to accept all that goes with it.

L0102: 1) Alternative #2 because it allows farmers to deal with them if needed and the cost is okay. 2) Alternative 5 federal government covers 90% and state of Montana covers 10% and put that on alternative 2.

L0114: 1) Eliminate all wolves as soon as possible. They are dangerous/vicious. They hunt cows, have killed or are standing long while cow herd awaiting birthing. The true cost will come in the cattle harvested, cattle lost. 2)The entire idea of wolves was an outrageous waste of taxpayer money.

L0331: Thank you for the opportunity to comment on the Montana Gray Wolf Conservation and Management Plan Draft Environmental Impact Statement (Draft EIS). Please accept these comments on behalf of Defenders of Wildlife (Defenders) a non-profit wildlife conservation organization based in Washington D.C. With offices across North America including Missoula Montana. Founded in 1947 Defenders has more than 400 000 members and supporters across the nation including over 3 000 in Montana many of whom reside within the historic and current range of the wolf.

Defenders is dedicated to protecting and restoring all native wild animals and plants in their natural communities. To this end Defenders has invested significant time and resources into restoring wolves in the northern Rockies and other regions. Our efforts to restore wolves work collaboratively with stakeholders and help reduce conflicts related to wolf recovery spans several decades. Since 1987 Defenders has compensated 227 livestock growers $272 354.25 through The Bailey Wildlife Foundation Wolf Compensation Trust. In Montana alone over the sixteen-year history of the Trust we have paid $112 871 for 150 cattle 293 sheep and less than a dozen llamas livestock dogs and miscellaneous livestock. Beyond compensation for livestock losses we believe the best approach to protect wolves and landowners is to prevent depredations before they occur and work collaboratively to provide alternatives and deterrents that resolve conflicts through non-lethal methods. Through funding provided by The Bailey Wildlife Foundation Proactive Carnivore Conservation Fund this work includes cost-sharing the purchase of livestock protection dogs radio activated guard alarms fencing hay and alternative grazing support and coordination of the Defenders¡¦ Wolf Guardian program to provide volunteer labor to assist in utilizing these and other non-lethal deterrents. Our volunteers have assisted numerous wolf packs and landowners throughout Idaho and Montana. Though the number of wolf depredations is quite small (less than one half of one percent) in comparison to other losses we feel the investment of our time and resources has created more tolerance for wolves and helped us form better working relationships among those who share the land with wolves. We continue to seek and implement new ideas that further the recovery and long term acceptance of wolves in their native territory. Wolf management and long term wolf population viability is of great importance to our organization and the members we represent. Comments on Alternatives MTFWP Preferred Alternative 2: Alternative 2 includes some favorable components such as enhanced ecological research interagency and tribal coordination and monitoring. However we oppose the liberalized lethal control and hunting of wolves as identified and described in this alternative. In particular we believe ¡§proactive removal of potential problem wolves¡¨ places the wolf population in jeopardy by killing wolves before there is any evidence of depredation or any attempts to prevent depredations. It is our belief and experience that working with a stable wolf pack can be more predictable and thus management to reduce or prevent livestock attacks can be more effective. If established wolf packs are eliminated new wolves will colonize the same habitat and the problems may continue or even increase. By working with livestock owners and wolf experts we believe non-lethal proactive methods in many circumstances can prove far more effective than lethal control. Under this component of Alternative 2 however the rush to implement lethal control of potential problem wolves may compound the problem. If these circumstances were to be adopted as standard management of wolf conflicts Defenders would strongly consider withdrawing our financial support and resources for compensating livestock owners. Unfortunately Alternatives 2 (and Alternative 3) are also too lenient in allowing the lethal take of wolves simply for threatening to kill livestock or pets. It is an especially troubling provision when applied to wolf management on public lands. This standard is far too vague and would allow for varying and liberal interpretation essentially permitting any livestock or pet owner to kill wolves simply for being present but without requiring evidence of depredation intent. The final plan should allow for the use of only non-lethal deterrents in the case of wolves threatening livestock and pets. It should not permit lethal control based on individual interpretation of what constitutes threatening conduct by wolves.

Defenders Preferred Alternative Defenders supports a modified Alternative 3 with the addition of a livestock and livestock guarding dog compensation program and a proactive non-lethal depredation management program to assist livestock owners in co-existing with wolves and other native carnivores. Though we understand the concerns stated regarding challenges and limitations of compensation programs many of those identified can be adequately addressed and the social benefit of such a program outweighs the limitations. We would work with the state of Montana and other entities to share funding new ideas and management sources for these programs. Examples of innovative ideas that could provide a source of funds include a Montana State wolf license plate or voluntary recreation fee. Defenders believes it would be inappropriate to create a sport-hunting season on a newly delisted species. This component should be eliminated from Alternative 3 and replaced with provisions for non-lethal harassment. Citizens should not be allowed to kill wolves except in situations of protecting human safety which are extremely rare. We favor the creation of the proposed annual workshop and interagency coordination meeting. We also hope the state of Montana will become a partner in the existing annual North American Interagency Wolf Conference currently cosponsored by the US Fish and Wildlife Service National Park Service Wolf Recovery Foundation and Defenders of Wildlife. Should a state advisory council be continued we would appreciate the opportunity to serve as a standing member of this committee. Both alternatives 2 and 3 offer fundamental strengths that we support and appreciate. These include: No artificial cap or limits on maximum wolf numbers in Montana. No artificial boundaries that exclude wolves from suitable habitat in Montana. No immediate hunting of wolves following delisting. Law enforcement protection for wolves identified as high priority¨ when pack numbers are low. Increased habitat enhancement projects. Integration of ungulate and carnivore management that is more holistic by approach. An emphasis on non-lethal proactive management methods when wolf numbers are low. Diverse stakeholder involvement in the development of this plan. Our comments are based not only on the presented alternatives but also on Defenders general criteria for state wolf management. Whatever plan is adopted in the final EIS it should include the following criteria in clear authoritative terms: Any provision authorizing the incidental take (i.e. Killing) of wolves must be restricted to takings that are unintentional and which occur in the course of conducting an otherwise lawful activity. All authorized take must be subject to avoidance minimization and mitigation requirements. Any incidental take allowed pursuant to the plan must not appreciably reduce the likelihood of survival and recovery of wolves in the wild and must be adequately monitored by the state. The plan must be adequately funded and contain provisions to deal with unforeseen circumstances. Assurances must exist that the plan will be implemented. No artificial limits on maximum wolf numbers or boundaries within a state. No immediate hunting of wolves. Each state must demonstrate that it can manage wolves at sustainable numbers and protect them from illegal or high level of take that could threaten the population. Minnesota for example proposed a five-year moratorium on any wolf hunting as part of its management plan. A focus on non-lethal methods of control for standard conflict management. This should include deterrents like alarm systems prompt removal of dead or sick livestock to avoid attracting predators increased use of guard dogs herders and range riders when appropriate and relocation of livestock from chronic problem areas on public land when other methods are unsuccessful. Lethal control of wolves should only be allowed when all other non-lethal methods have been exhausted. Public education on the importance of wolf conservation and on-going opportunities to participate in wolf management decisions and recovery efforts. Adequate mechanisms to accurately monitor wolf populations on an annual basis. Protected status for wolves under state law until all recovery goals are met and sustained. The current alternatives allow the state to reclassify wolves as a big game species based on vaguely defined criteria that could threaten the wolf population. For states to live up to their responsibility as the primary caretakers for wildlife within their borders each must develop a management plan for wolves that includes the standards listed above. Without such a plan the state will jeopardize years of hard work restoring this keystone species to its native habitat. Defenders believes that humans and wolves can coexist with a minimum of conflict but it will take dedication and planning on the part of the state and its citizenry. We appreciate the comprehensive public comment opportunities of this EIS process. We hope our concerns will be considered and efforts made to ensure the long term viability and humane conservation of wolves in Montana. We look forward to working with the state toward this goal.

E11: In reference to specific alternatives I prefer alternative 3 simply because the breeding pair benchmark is higher. I think that a benchmark of 20 as opposed to 15 would put Montana wolves at a safer distance from the prospect being classified as endangered again. Overall I am concerned with the alternatives that allow for lethal take of wolves for threatening livestock. Every person's definition of threat is a little different which makes me feel that this concept is too ambiguous to allow for the lethal take of wolves. I believe the alternatives are too lenient for allowing people to kill wolves for threatening their livestock especially on grazing allotments on public land. Lethal control should always be the last resort. Though I prefer alternative

3 I do have concerns for this alternative. I am concerned about there not being a compensation plan under this alternative. I believe that a compensation program is necessary to keep everyone happy. I also think that under all the alternatives that there should be incentives for citizens who are working to reduce or avoid conflicts between their livestock and wolves. Since wolves are here to stay it is important for livestock owners to demonstrate responsible animal husbandry practices such as removing dead livestock carcasses treating and removing injured or diseased animals and avoiding active wolf den sites. Also I believe that the state of Montana should continue to have a wolf management advisory committee to continue to identify discuss and discern management goals aid in resolving conflicts and to educate the public.

E12: 1. Recovery goals should be based on viable self-sustaining populations without an artificial cap. The draft plan is too lenient in allowing the lethal take of wolves simply for threatening to kill livestock or pets-especially on PUBLIC LANDS. The final plan should allow for only non-lethal deterrents in the case of wolves threatening livestock. Lethal control should only be used as a last resort when other methods have been exhausted and failed. Reasonable incentives for citizens working to reduce or avoid conflicts should be considered and adopted. It is important that livestock operators and owners also demonstrate responsible animal husbandry practices including the removal of dead livestock carcasses and avoiding active wolf dens. Include a provision for a state wolf management advisory council to continue to identify discuss and discern management goals conflict resolutions and public EDUCATION opportunities. Begin wolf management training for wolf biologists prior to delisting. Training should prepare biologists for management including radio collaring and monitoring wolves. Stronger penalties for ILLEGAL take of wolves. Identify reasonable and appropriate funding strategies for state management by working with stakeholders. 2. Alternative 1 would be the closest and most appropriate.

E15: 1. Our family has been using livestock as a tool to manage the health of the range resources we control in southwestern Montana and southeastern Idaho since the 1880's. Agrarian societies and wolves have never been compatible. This is why wolves were removed from agrarian communities in the United State and in the rest of the world. Wolves were pushed back into areas that were not utilized by livestock. The Endangered Species Act was used by extreme preservationists to bring the wolf back and cause land use changes. Much of the private land in the western United States is used for livestock production. When the wolf forces livestock off these lands this land will be sold to wealthy recreation interests and the wildlife habitat will be fragmented beyond recognition and the openness of the West that draws people will be lost. Most of the public lands are intermingled with private lands that contain the most productive and valuable habitat. My comments on the preferred alternative are being made recognizing the above realities and the past inability of the Montana Fish Wildlife and Parks (MFW&P) to control wildlife numbers and failure to recognize and adequately compensate landowners for their contributions to wildlife habitat and the coffers of this state. These comments are being made on the Preferred Alternative as presented in the Executive Summary. Wolf Management The wolf will fall under the same category as the black bear and mountain lion yet presents a much greater problem than these two species to the game herds and the livestock industry. All a wolf needs to survive is something to eat. The wolf will be much more difficult to control. To suggest that they can be managed the same is unrealistic. The wolf should be put in a separate category that recognizes that he is nature's primary killing machine and design tools that can address and compensate for his impact. The MFW&P is going to ask for compensation for an illegal harvest of a wolf but refuses to pay for livestock taken by a wolf or ask for compensation for wolf takings of other wildlife. This needs to be addressed. Number of Wolves in 2015 How can we depend upon these numbers? I well remember the numbers proposed for the MDFW&P elk plans. The plan needs a mechanism that will make MFW&P liable to the hunter and the livestock industry if these numbers are not held to. Distribution in 2015 All distribution will be localized and as the prey base of wild ungulates decreases wolf will be forced to target livestock and pets on private lands and in more populated areas. If statewide distribution is being considered this plan is much bigger than being portrayed. We need specific population areas and numbers otherwise we will have more numbers than needed to satisfy the USFW and the MDFW&P have a dismal record in managing numbers especially elk. Wolf Habitat connectivity Land Management when the wolf was first being introduced the USFW Service met with the ranchers and assured them that the wolf had limited habitat requirements. This heading supports the preservationists' goal in using the wolf as a takings weapon: "Connectivity assured through legal protection". It looks like the MDFW&P is going to use the wolf to manage land. This is outside their legal authority but is increasingly becoming their intention. This section of the plan should be dropped because the nature of the wolf makes it unnecessary. Private Property the implications of having wolves versus other publicly-owned wildlife on private land is not comparable. One must understand that the wolf is the ultimate predator whether classified as such or not. Once the wolf is delisted it becomes the responsibility of the State of Montana and managed by the MDFW&P. Forcing the private landowner to accommodate a wolf limits his ability to use his property as he wishes. This is a takings and since the wolf is delisted and Montana is responsible Montana will incur tremendous liability. This liability must not be accepted by Montana in this plan and the federal government and/or the successful petitioners must be held responsible. This issue could break the state of Montana. Compensation As discussed under private property when the wolf is delisted it becomes the responsibility of the State of Montana. Originally the wolf was eliminated from Montana because it was not compatible with the other land users. This was a cooperative program with the state. The wolf is the supreme predator and cannot be compared or treated like other predators or game animals. As wildlife numbers decrease or move onto private land for security the wolf will follow and the numbers of livestock losses could explode. It is imperative that the state of Montana and/or the federal government be held responsible for the total costs of livestock losses. This will assure that Montana and the federal government will responsibly manage this negative impact of wolf reintroduction. The rancher already supplies a big share of habitat and feed for the state's wildlife are we also obligated to supply the meat to support the wolf? All livestock losses from wolves exceeding that predicted in 2015 under the preferred alternative in table 3 should be paid by the state or federal government. Economics Livelihoods This section is poorly addressed. The potential economic impact to livestock operations and the resulting change in land ownership patterns is immense. No attempt to understand the current financial stress of the public land livestock industry is apparent in this plan. No guarantees are made as to the efficacy of the plan to control wolf depredation. The private landowner is left to fend for himself with few tools. No consideration has been given to the impact to Montana and wildlife habitat as ownership patterns change due to the loss of a viable livestock industry. This wolf management plan could directly contribute to these potential changes. Takings of private property private property rights and livelihoods is generally being ignored. This section needs to be expanded. MEPA NEPA requirements All the ramifications that this Wolf Conservation and Management Plan will have on the livestock industry landownership patterns county economies the support of the county infrastructure other wildlife and hunting opportunities and subsequent revenues have not been addressed to the extent required by MEPA and NEPA. What is especially of concern is the unwillingness of the MDFW&P to accept responsibilities of the management of the wildlife under their direction and mitigation for the damages and impact cause by this wildlife. The politics of the Endangered have the potential to destroy all that we have worked for in Montana. It is important in this plan to force those responsible for this dilemma to mitigate the consequences. This is the only way we are going to stop this madness that will ultimately end up with single use of the resource by those who refuse to accept the responsibility of ownership. 2. see above.

E16: 1. Although I am Currently not a resident of Montana and don't even own property in the State anymore I still am In Montana on a regular basis throughout the year.. As I know this comment will not be regarded as applicable do to not living there at this time I wanted to relay my thoughts anyway I hope they will help in the process.. As a Livestock owner I can see where the introduction of these animals can and will continue to be a hardship on the farmer/ rancher. Taking that in consideration I would think that the Updated Council Plan to be a very good and effective plan to put in place.

Although the Enviro. movement will probably disagree. I have been involved for many years in trying to restore the Cedar River Basin through designing a Basin Plan & through the Cedar River Council which I was a member for many years. We have made great strides however no matter what one does for some it is just not enough. They will never be satisfied until all of this country is the way they feel it should be. Again I want to commend you for your efforts and hope that this plan is put in place so we can move on with managing these animals in a way that they will fit in with the rest of the creatures that we want to support and Harvest. 2. The only thing that I would add is that I hope a good plan can be implemented for helping livestock owners to recover the lost revenue from the certain continued attacks of these wolves in the future.. There are cost to all endeavors including Ranching & Farming and one can not be at the side of there livestock 24/7. Wolves are not stupid and so why would they chase down a deer or elk if they can walk up to my cattle and take one out easily.. Breaking that trend will be a large problem I am sure. Just taking them to another area will not solve the problem typically. Again Thanks For All Your Efforts. We who pay to hunt and fish appreciate your efforts.. Thank You

E19: 1. I believe wolves can a nuisance to ranchers but there are alternatives for the wolf and it's existence. One of ideas would be to ask the ranchers to build a good quality fence around there land or pastures where the cattle are. The strong fence would act as a protection. I know it would be a lot of money to actually be able to buy a very good quantity of fence but MAYBE a little government funding could help with the some costs. Set up some advertisements to help get funding and donations to help pay for the fences that should hold & protect the ranchers cattle. I'm sure a lot of people out there love wolves and would help with their donations. Then if the wolves at anytime get through the ranchers fences damage or not then the ranchers should have the right to destroy them. I think the Ranchers need to be more self motivated about protecting their cattle. Cows are easy game and the fences are also easy to cross. I would modify the ranchers SELF MOTIVATIONAL SKILLS. 2. Another suggestion would be to take the wolves from birth and raise them like pets like dogs. This would take along time but in the long run maybe wolves wouldn't have to depend on the ranchers cattle to a food source but rely on humans to feed them dog food & water. The first dog ever was just as wild a wolf. Dogs originated from wolves. If the dogs can do it then so can the wolves. In the long run of course. Wolves need a little help to understand and a little civilizational skills that could happen eventually over time and maybe soon they wouldn't be such a big problem.

E50: 1. Updated Council--Alternative 2 Wolves as long as we have to have them should be managed by the State. This is the best balance of the alternatives. I am most concerned about the impact of wolves on livestock producers. Funding should not be at the expense of other FWP programs. 2. ok as is.

E56: 1. I feel that Alternative 3 has the best chance of succeeding in maintaining a viable wolf population over the long haul. It sets a minimum of 20 breeding pairs; it sets no artificial limits on the wolves' boundaries; adequate state funding must exist to carry out the protection policy; wolves can only be eliminated if they present an immediate danger to livestock. 2. Since wolves are responsible for less than 1% of the livestock loses in Montana I feel that the livestock protection issue is way over emphasized. Also eventually wolves and other wildlife will be the biggest source on income based on tourism in states such as Montana Idaho etc. Nothing should be done to jeopardize such natural sources of state income.

E61: 1. Alternative 2 gives landowners means to control (within reason) the safety of his livelihood and be compensated for losses. 2. Would riders and ranch employees who are responsible for livestock have the right to use kill permits as well as landowners since they would be likely to observe conflicts? I think that when livestock is killed injured or threatened the entire pack should be eliminated to prevent additional losses expense and time.

E76: 1. Alternative number 4 Minimum Wolf because as a rancher I feel we need to have an aggressive management check on wolf population growth and restrict wolf distribution to enable livestock producers to limit livestock losses due to wolves. 2. By having livestock owner's be able to kill wolves on site if livestock is being harassed or killed.

E78: 1. I support the implementation of Alternative 2 – Updated council (Preferred Alternative). This is a thorough and solid plan that I believe will ensure the persistence of wolves in Montana while adequately addressing the potential environmental and social impacts of a recovered wolf population. 2. Please consider the following comments in regards to the draft wolf environmental impact statement: 1. In the section titled Prey Populations it is stated: "If reliable data indicate that a local prey population is significantly impacted by wolf predation in conjunction with other environmental factors FWP would consider reducing wolf pack size." Given that prey populations naturally fluctuate in response to a variety of different environmental and biological conditions I believe that it is important that you clarify what is meant by "reliable data." Of course it is reasonable to believe (and has been shown) that prey populations have declined due to predation and in some cases wolf predation may serve as an additive factor. But predators are often the first to take the blame for perceived declines in prey populations and significant pressure is often put on managers to control predators in these instances. Indeed predators are easier to control than the weather or disease. But ecosystems are complex and it is often difficult to tease out the effects of predation on prey populations even after multi-year studies. I foresee wolves often taking the blame for declines in prey populations and therefore highly recommend that FWP clarify what kind of data are going to be used to sort out this issue. 2. In the section titled Livestock/Compensation I have 2 issues to address regarding 1) identification of individual problem wolves and 2) use of selective removal methods. In the 4th paragraph it states: "Management actions will be directed at individual problem wolves." Although this is a logical approach it has proven difficult under USFWS management to identify individual wolves involved in livestock depredations. Attempts have been made to identify problem wolves but many control actions have resulted in non-selective removal of wolves from implicated packs. Also in paragraph 4 it states that: "Non-selective methods such as poison would not be used." No mention is made of aerial shooting of wolves as a potentially non-selective method and this needs to be addressed. Aerial shooting of wolves has been one of the primary control methods used by WS but I would argue is one of the most ineffective and non-selective tools to manage depredating wolves unless the goal is to remove the entire pack. I believe the best long-term strategy for managing depredating wolf packs is to attempt to create a control situation whereby remaining pack members may learn from the event. Packs that undergo partial removal by aerial gunning do not experience any learned behavior in associating depredation behavior with the removal event because control often takes place away from the depredation site. I believe the concept of learned behavior needs to be taken into account in how lethal control is carried out because aerial shooting of wolves is extremely expensive and a waste of state and federal money unless conditions do not permit an alternative option. Therefore due to the combined problem of properly identifying problem wolves and conducting selective removal I recommend the following approach to lethal control in situations where livestock are kept in confined pastures (most private land situations). 1.) If problem wolves can be identified then aerial shooting may be an acceptable option. 2.) If problem wolves cannot be identified then the first step should be to issue shoot-on-site permits to the affected landowner(s). If the landowner shoots a wolf or wolves on his (her) property then this situation has the potential to create a situation whereby the rest of the pack learns to recognize the area as unsafe while at the same time enabling the landowner. This method is also less expensive then using WS to conduct control. 3.) If the landowner does not want the shoot-on-site permit but still wants wolf removal or if the shoot-on-site permit does not result in the taking of a wolf but depredations continue then WS should initiate trapping operations on the ranch or attempt to shoot wolves on the ground (example: shooting wolves that return to carcasses at night). 4.) If #2 and #3 fail then initiate aerial shooting operations. When depredations

occur on public lands I recommend the following approach to lethal control. 1.) If problem wolves can be identified then aerial shooting may be an acceptable option. 2.) If problem wolves cannot be identified then control should consist of trapping around the carcass or shooting wolves that return to the carcass at night. This assumes there is enough of a carcass remaining that it is likely that wolves would return. 3.) If #2 fails then initiate aerial shooting operations or issue shoot-on-site permits to livestock owners. 3. In section titled Livestock/Compensation it is stated (7th paragraph): "Considerations leading up to removal of wolves include persistent wolf activity evidence of wounded livestock the likelihood of additional losses if no action is taken evidence of unusual attractants and/or intentional feeding of wolves." The way this is worded makes it sound like "evidence of unusual attractants and/or intentional feeding of wolves" could result in the removal of wolves. I do not think (hope) this is what was intended by the statement. This should be rewritten to clarify that "evidence of unusual attractants and/or intentional feeding of wolves" may result in decisions to NOT remove wolves. 4. I am very pleased and supportive of FWP's proposing $50 000 annually to be allocated to "efforts to reduce the risk of depredation and implement more proactive management strategies." In the Livestock/Compensation section there was mention of WS potentially helping with these proactive efforts. I believe that this is INTEGRAL to a successful proactive management program and would recommend that FWP include this as part of their annual contract with WS to ensure their involvement.

E83: 1. FWP plan looks adequate and I have faith that FWP has the qualified individuals to make their plan functional and tweak it as necessary as dictated by the experiences and observations of time. 2. My concern is that stockgrowers or exotic animal hobbyists (llamas) may indiscriminately destroy wolves under this plan and get away with it … all the while not contributing to the funding of FWP and the field officers they tie up. No matter that their compensation will not be from FWP funds… the cost is still obvious. It is my hope that such incidents will be vigorously investigated and some reasonable amount of proof demanded before accepting such killings. Just as important – if such persons defy or ignore the recommended precautions (as some now do) they should receive no compensation and be subject to fines.

E88: 1. Alternative 3 is the best alternative for Montana Gray Wolf Conservation and Management. Additional wolf pairs/packs are necessary prior to implementation of liberal management tools. 2. Greetings: During transition from Federal to State management of the gray wolf the following issues need to be addressed either by Memorandum of Understandings revised EIS subsequent administrative rule-making through FWP Commission etc.: 1) The statute MCA 87-3-130 requires formal definitions of threatening to kill or attacking or killing prior to State takeover. This pertains specifically to domestic dogs and the definitions of what is included in the term livestock. The creation of formal definitions will avoid the unnecessary killing of the gray wolf by homeowners and/or ranchers who have built their homes within the ecosystem/habitat of wildlife and feel that their rights and livestock should be protected. If homeowners/ranchers choose to live near National Forests or public lands then they choose to deal with the consequences of predator/prey dynamics. 2) Education - Education and outreach funding needs to be increased during the transition to State Management. 3) Monitoring - The wolves must be handled as little as possible. Collars and hands-on control must be decreased as numbers of packs/wolves stabilize. 4) Trapping - No wild animal should be trapped for sport game or predator control by the public. In fact no animal should be trapped including the inadvertent trapping of livestock recreational users of public lands and dogs. Trapping of wild animals by Federal or State agencies for preserving packs or wildlife should be implemented ethically by trained/qualified personnel under strict policy procedures and guidelines. The reintroduction of the Gray Wolf to YNP and Idaho has been a great success. It is imperative that tools are in place to maintain the minimum number of breeding pairs within each state or relist the Gray Wolf. There must never be an entire pack decimated (it was close to the entire pack) on public land (Boulder-Whitecloud) again. Thank you for the opportunity to comment.

Compensation

Summary of Comments: These comments address payments to livestock producers and others who experience wolf depredation losses – some comments strongly support FWP creating a compensation program while others strongly oppose it. Some comments express even stronger support for having increased access management tools under a state program compared to the existing federal program -- in lieu of creating a compensation program. A few comments suggest that compensation doesn't buy tolerance and that it should be called "restitution" in the context of payment for "damages" to private property and for other indirect costs to livestock producers. Many comments mention the source and reliability of the funding and question how compensation would/should be administered. Some comments provide more detailed input on what should be covered, how a compensation program should work etc.

Response: The council discussed this issue at great length and in conjunction with wolf management strategies and wolf-livestock interactions. The Council believes, and FWP concurs, that there is a place for a compensation feature within the overall wolf conservation and management program. The Council and FWP acknowledge that tolerance for wolves on private property is fundamental to maintaining a viable wolf population in Montana. Furthermore, wolf restoration has resulted in the loss of personal property by wolf predation. A compensation program will help address that disparity, as well as provide a mechanism by which those who benefit from wolf restoration can help share the in the costs of long term conservation and management.

Under the preferred alternative, addressing wolf-livestock interactions will entail two separate, but parallel elements: 1. Activities by FWP, USDA WS, and individual producers to minimize the potential for wolf-livestock conflicts and to resolve conflicts where and when they occur and 2. a compensation program that would address economic losses of individual producers when livestock are confirmed or probably injured or killed by wolves. Management and compensation are funded, administered, and implemented separately and independently of one another, but are interrelated. They parallel one another, united in the goal of maintaining a viable wolf population and addressing economic losses. The reader is referred to pages 76-82 in the Draft EIS for greater detail on how these elements fit

together and how the program would be funded. FWP also believes that through proactive technical assistance and collaboration with livestock owners and the available conflict resolution tools, the financial obligations would be manageable.

FWP was recently involved in a cooperative effort to review existing compensation programs and research their effectiveness. Final results are expected late summer 2003. FWP will seek input from the public, the Wolf Advisory Council, and other interested parties when it begins to develop this program element. FWP will also explore the possibilities of partnerships with other organizations and other mechanisms of reimbursing those economic losses, such as insurance pools.

At this stage, FWP is committed to making sure that a compensation program or some other mechanism to address direct economic losses to livestock producers is developed. FWP acknowledges and thanks individuals who provided more specific input on how the program could be structured, funded, etc. FWP will revisit those comments when it begins working on the details.

Representative Comments:

W32: Uncomfortable with the cost. Especially with compensation. Why is wolf damage compensated and not other loss caused by other wildlife? Compensate for all forms of damage.

W81: Alternative #2. Compensation programs, livestock addressed twice. Kill permits PLUS compensation; seems like if they have the right to protect their livestock, we shouldn't pay them if they do a louse job.

W114: The compensation money needs to come from more than one source.

W122: Wolves should have equal right to take wildlife as any hunter. Strict evaluated poaching penalties. Fines should be higher than other species due to low numbers. Less compensation for livestock losses on public lands.

W123: Some percentage of the funding form compensation program should be from federal government.

W133: Who compensates for lions and bears?

W142: Alternative #2. Compensation – can't even find all the carcasses, much less document cause of death. Loose 10 cows and never find them – so never compensated.

W149: What about a sliding scale compensation related to landowners participation in predator prevention practices? But there is also liability in terms of guard dog loss etc. Would encourage creativity in more of a payoff.

W180: I like using compensation. I am leaning toward a blend of alternatives – I'd like #2 with compensation.

W193: Would drop compensation. People need to be responsibility for their pets and livestock. If a problem arises, I agree they should contact FWP and federal agencies and figure out how to address problems and manage their livestock the FWP manages wildlife.

W199: Prefer #3. I like the 20 breeding pair requirement. I think compensation for livestock loss should be the same as in Alternative #2.

W323: No way to control them on public or private land. Compensation too hard to prove actual losses. If I regularly lose 5%, then I lose 15%, anything over the normal should be compensated.

W325: Funding for compensation should come from the feds.

W327: Like to see protection or compensation when livestock are on allotments.

W368: Don't like State of Montana coming up with compensation. People who like wolves should pay.

W377: Compensation come from special permits.

W402: There are actual livestock losses well above (3-10x higher) – spent $81,000 but Rock Creek lost more than $30,000 last year. Need to lighten up standards on what we call confirmed kills. Compensation expenses for broken leg, vet fees, aborted calves, fences, cow dogs, added monitoring of livestock.

W407: Alternative 3 will fail without compensation. Too many wolves and no compensation. Doesn't make sense. Won't work here (Avon).

W414: How do you decide on compensation? What we do now isn't working. Defenders is not doing the compensation intended. Admirable effort, but need to loose requirements

W435: Doesn't make any difference which alternative. Does anyone know how much this is going to cost the state? Where will money come from? Does state know how many wolves are in Montana?> Alternatives without compensation not possible.

W436: Proving that it is a wolf kill is hard! Should be easier to prove wolf kill.

W443: Maybe compensation should be more than 100% cause can't prove every case. Private landowner should have more flexibility.

W449: Federal government introduced wolves and they should pay compensation.

W453: Not sure we'll get the sportsmen to pay for compensation.

W461: Compensation should be based on what the animal is worth based on production potential.

W462: Lean towards #4, but with compensation.

W510: In order for alternative 3 to be viable, you must have a compensation program.

W513: See if we could earmark funds from the bed tax for wolf/grizzly management and/or compensation.

W519: Will never be able to develop a compensation program that fully compensates the landowner for livestock loss.

W532: Some states such as Minnesota run out of compensation funds half way through the year.

W579: Has a sunset date been considered for the compensation program? A compensation program should draw from the broadest possible base.

W612: More in favor of compensation on private land than on public.

W615: Compensation for wolf losses documented on private land should not be sunseted – keeps ranch, livestock on landscape.

W677: compensation programs have to empower the landowner more.

W680: Opposed to compensation program – it does not address the problem. It increases the problem. Use dollars to have Wildlife Services address depredation issues.

W725: Landowners have flexible tools (compensation); some ranchers prefer additional flexibility vs. compensation program.

W726: Don't' make them have to have someone come out and look at kill to verify etc.

W727: I like the idea of the compensation program.

W785: Compensation – I don't like the work compensation; it should be more in the form of damages; someone should be responsible for damages to my private property.

W804: If we don't like what is happening to our animals (livestock) on public ground, can move to private ground. Idea – if your allotment is in a high risk area, fed government should compensation (adjust) accordingly.

W822: Compensation to the producer has never been addressed. If you have a registered case that has produced 2 prize willing bulls – she has the ability to produce 8 more calves, how are you going to pay for calves lost that are big money makers?

W826: I like alternative #3 best with the addition that state would develop a compensation plan. But I think #2 is most reasonable because it balances the need of having wolves in Montana and the landowner and livestock owner's needs.

W842: Compensation – where it is going to come from? How long will these funding sources continue?

W856: I like the fact that there is a compensation provision in #2, but that it isn't coming from hunter $$.

W857: How will you compensate hunters who don't get to take an elk because of lessening oppor8tnity due to wolves?

W859: What about the hounds man or rancher who loses dogs to wolves? Will there be compensation?

W867: Compensation doesn't always pay for lost livestock. 1 of 8 paid is all. We're looking at an insurance program that would pay for lost stock.

W918: Defenders fund, ranchers etc. set up insurance fund for paying for predator losses.

W922: Compensation program needs to be user friendly; give ranchers the benefit of the doubt; streamline.

W973: Can we depend on Defenders of Wildlife to continue their compensation program?

W1049: Better to spend money managing wolves than on compensation.

W1103: These wolves are just another nail in our coffin. Individuals that harbor wolves on private property should have to compensate landowners for losses caused by the wolves.

W1122: Trust sounds like a good approach. States get $ from it. Put a bucket at each entrance of the part for wolf compensation trust.

W1194: No compensation for black bears and lions; should be the same for wolves. Work with landowners to have predator friendly livestock operations.

W1229: Compensation should be for ranchers, but also losses to sportsmen; should be considered and compensation for loss as it was sportsmen dollars that brought back the prey species.

W1332: Like alternative #3, but add in compensation like in alternative #2; Compensation should not just come from those who want wolves… should be like other government services – all tax payers pay.

W1351: FWP biased against alternative #4. FWP needs to develop range of reasonable alternatives. Alternative #4 ok but FWP is not giving it a fair presentation. Need compensation program for #4 and Department of Livestock needs to pay for it.

W1358: Compensation – business/group insurance to pay for livestock losses. Develop multi-state/group insurance. Ranchers pay just like other businesses. Let Department of Livestock kick in if they want.

W1404: Compensation to sportsmen of Montana to potential loss of hunting recreation and economic impact to state- private and federal funds.

W1423: Cut red tape on compensation – speed is important.

W1429: Compensation program – what are the options ranchers have for losses other than wolves? Should be some compensation, but not just for wolves.

W25: 1. We should have vibrant, viable long-term conservation for wolves, and I believe Alternative 3 provides the option. Wolves can generate a lot of tourism dollars and help balance our Montana wildlife. Wolves should be managed like any other wildlife we have in MT -- elk, bears, mtn. lions, etc. 2. Let wolves act naturally in their environment. Create funding from tourism revenue to compensate ranchers who receive livestock losses. Rather than using reactive control measures (I.e. shooting, trapping), use public outreach in pro-active ways to avoid lethal measures.

W27: 1. Alternative 2 & 3. Larger #s of breeding pairs (relative to all alternatives), allowances for adaptive mgmt, compensation (but see below), shift of mgmt away from USFWS to MT FWP, consideration of prey base, consideration of livestock owners, continued monitoring. *How would monitoring be done? Concern that each of the 3 states holds to their "10 b.p." minimum. I that no state perpetually operates below that minimum with the expectation that the other states will make up the difference. Also, that the agreement made by each of these 3 states' governors to accept this responsibility of a minimum of 10 bp will continue to be upheld, despite potential administration changes. 2. *Compensation issues -- 1) distinction between loss of livestock on private land v. public lands 2) potential for buying out grazing rights on land that is attractive to wolves instead of destroying every wolf that comes to that area. 3) Solicit funds for compensation from those with a vested interest in wolves (i.e. wolf supporters, cattle industry). *Increased outreach education with landowners/livestock owners to mitigate losses to wolves. *Management is science based and there is a continued partnership with FWP and universities to incr. our knowledge on wolf ecology. *# of breeding pairs should be less rigid and more flexible as more science on wolf ecology, carrying capacity becomes available. Concern that each of the 3 states holds to their "10 bop" minimum and that no state perpetually operates below that minimum with the expectation that the other sates will make up the difference. Also, that the agreement made by each of these states' governors to accept this responsibility of a minimum of 10 bops will continue to be upheld despite potential administration changes.

W77: 1) Alternative #2. This does not spend disproportionate amount of money on wolves, other species are of concern and need to be managed. It monitors a viable population and allows livestock protection. 2)If livestock owners are allowed to kill and haze to protect their animals why should they still get compensations? Why 15 pairs? Couldn't a reproductive value be more accurate?

W81: 1) I am with alternative #2 because I still have faith that FWP has particular insight on this issue, having been the recipient entity of all the concerned opinions of the Montanan's they serve. I like the possibility of being able to pressure them through seasonal hunts, and also since I am not the biological expert on the perfect number of breeding pairs we should allow. I like to lean toward the larger number to keep them off the list. 2) We should have a plan to share our bounty of predators with others across the USA as we should be generous and share with those who love them so much that they lobby from thousands of miles away to help the western states enjoy them exclusively, we are being unfair to keep them all to ourselves. On compensation once off the list compensation doesn't seem correct to me.

W87: Updated council, alternative #2. I would like to see local state control compensation program is important. Important to stay at 15 breeding pairs above the minimum requirement.

W107: Either alternative 2 or 4 because private land owners and livestock owners need to be able to protect property and livestock. We can't depend on the government to do it. The compensation plan is a joke. 2) I like most of plan 2 but the federal government should be responsible for compensation for livestock over historic death loss.

W115: 1) #2 gives flexibility to deal with problem packs. 2) Balance prey/predator /livestock. Emphasize funding needs. Get people who want wolves (not livestock or hunters!) to foot the bill. Relax the "proof of kill" before compensation is given. 90% of kills - especially in summer are never found. If 1% summer loss is my norm and now with wolves around, it is 5%. I should be compensated for 4%.

L0034: 1) Alternative 4. I feel it is necessary to minimize the livestock conflicts. The Federal implementation of the wolf introduction should require full responsibility for funding. 2) The Federal funding should also apply to livestock losses. There are logical situations that occur that have no compensation. This is not a just and fair practice and leaves the Montana food chain at an unjust and extreme disadvantage.

L0038: I concur with your preferred alternative. I personally would like to see wolves thrive in areas where that is possible and I think you have crafted an alternative which meets the needs of many different people who have often conflicting views on how wildlife in the State should be managed. I do have two specific comments on the draft. I think alternative 3 suffers somewhat by taking out the compensation program described in 2. I think a lot of people, like myself, who favor an aggressive wolf management will want to support alternative 3 but, without the compensation program set out in alternative 2, its feasibility becomes less practical. I think the discussion of economic consequences on page 109 is pretty weak. I understand that the information might be pretty hard to get at but perhaps you could improve the plan by providing an economic component to the monitoring program which will accompany the plan.

L0092: The Grey Wolf should not be de-listed. Their recovery is not sufficient. Delisting at this time would put the state legislatures on the starting blocks to completely eliminate wolves. The Defenders of Wildlife has and will continue to pay for losses to livestock due to wolves. The losses have been minimal. Extending and protecting road less wilderness makes a lot more sense than gutting the Endangered Species Act. Habitat is the key to survival of all the species including Homo sapiens.

L0176: My preference is plan #3, second choice plan #2. Compensation programs, however they are funded, should not become a permanent entitlement or worse, a way of buying off livestock producers and assuaging the conscience of "pro-wolf" advocates. It inappropriately sets wolves in a "special" category from other predators and other losses due to wildlife. It perpetuates the cartoon characterization of wolves by "excusing" their natural behavior with monetary compensation for the behavior. It bribes and demeans ranchers. The presence of wolves on the landscape reduces, like many other factors (weather, beef prices) the degree of control a rancher can exert over his livelihood. Incorporate compensation in the management plan ONLY under a sunset clause where it is understood that the compensation will either end on a set date OR continue only if the program is funded adequately through a bi-partisan sources (not JUST the wolf huggers). Any compensation program should seek to draw funds from the most diverse possible sources, including the meat and agriculture industry. If there is strict sunset provision (say 5 years and then compensation ends) it puts ranchers on notice that they have a reasonable time to make adjustments to the new reality of wolves on the landscape and it financially bridges that adjustment time. The compensation fund should also financially support education and innovation in regards to new approaches to managing livestock in an environment that includes wolves. Incentives for those ranchers willing to struggle with the adjustments necessary should be more important than paying off ranchers for affects of predation. Compensation should only apply to predation losses suffered on private property. This sends an appropriate message of support for the sanctity of private property and at the same time, signals that those who use public land accept certain caveats along with that usage. Only hunting, not trapping, should be allowed as a proactive management tool for culling wolves. Trapping is not only very difficult to defend in terms of the perceived brutality but it does little to condition wolves in ways that benefit wolves and humans. Wolf hunts should be conducted under strict regulations based on best science and in such a way as to do the least damage to pack social structure. Wolf hunts should only be guided commercial hunts, conducted with an outfitter who has been trained and certified by FWP. FWP would designate those animals available within pack structure who may be taken and outfitters would be certified and trained to select those animals for their hunter clients.

L0186: Any wolf on private property or livestock allotment can be killed by livestock owner or anyone he or she authorizes. They can be listed or game animals on public property with no special license fee or no limited season. Their only safe haven in state and national parks. As for compensation for livestock loses, actual or suspected. The general public, who allowed their reintroduction will assume full responsibility for reimbursement at full market value. Also the cost of administrating the program will be in the hands of those wildlife and environmental organizations that pushed reintroduction.

L0207: 1)Alt. #2 because of compensation program. Without the compensation program it would be alt. #4. 2)Wolves are not needed in Montana.

L0209: 1)The feds did not give us any choices. Now we have 5 alternatives. What alternative will we have when the prey animals are eliminated? Regardless of the alternative selected the feds will still have the final say. So alternative 4 is my selection. Let the feds pay for what they want. 2)Funding will become a problem as the packs increase. Also insist on federal compensation for depletion of game animals and livestock losses.

L0212: 1)#3 Maximum wolf. The ecosystem evolved with wolves and important part, weeding out the weak and the sick prey and stabilizing deer and elk populations and the result being genetically superior population of prey species. While wolves can become predators on domestic livestock, this problem should be dealt with by weeding out problem animals. 2)Stock predation on private land should be compensated for, by the government if private compensation is not available. Stock losses on public land would be considered part of the cost of doing business and some allowance for such losses should be recognized in determining grazing permit fees.

L0217: 1)Alternative #2 is a step in the right direction. 2)Compensation for losses to livestock must not only cover death losses but also the loss of weaning weights and the lower pregnancy rates created by the wolfs presence. Due to our range land remoteness, confirmed kill compensation is not totally feasible. We must compensate for probable loss also.

L0259: 1)Nor shall private property be taken for public use without compensation. Amendment 5. 2)Let the wolf lovers start buying hay-feed to replace the land or grazing the rancher can not use. I intend to go by the constitution of the USA. Combat vet. WW2. I don't scare, pay me $20,000 for 2002.

L0284: Alternative number two is the better proposal offered. The MWGA does not approve of the term "compensation". If the public wants wolves, the public should pay for full damages caused by wolves. MGWA makes a point that it is not just the loss of the animal that is costly to a rancher, but other costs such as time attempts to keep prey and livestock apart, stress that is real on the other animals not actually killed by the wolf in its' attack on animals. Alternative #2 while this option seems to be the one that may work we don't think some of the things that wolves do is addressed. We are concerned as to how they will be counted toward the 15 pack management preference when it comes to more aggressive management plans should the number of packs drop below fifteen. MWGA does not believe the plan speaks to smaller number of wolves, which might not meet the definition of a "pack". The term "social group" is used, and maybe that definition is not clear. MWGA is not in favor of the Montana Fish and Wildlife dept. being the "controlling agent". MFWP lacks the expertise and we think the willingness to deal with predatory animals causing livestock losses. MWGA believes the federal Wildlife Services under USDA/APHIS is the only appropriate agency to deal with wolf control. Funding for wolf control must come from appropriations of the federal government under Interior and USDA. Quick responses to wolf predation. Let USDA/Wildlife Services do the field work. Any wolf management proposal must clearly state a procedure for the livestock owner, get a quick remedy. The plan can't have a mixed bag of people

notified and making decisions. We don't see in the plan any addressing of the consequences of having wolves on your property when it comes to other predation of having wolves on your property when it comes to other predation management. Are using the wolf to end coyote control. Alternative four looks good on the surface, but with the state having to pick up the funding for control and for payment of damages, that is not an alternative. Alternative #5 must also be considered seeing the already threats by environmental non-hunting groups to stop any delisting of the wolf.

L0314: I am in support of the wolf reintroduction program as well as wolf management in the state of Montana. I would like to see this handled scientifically and not ruled by emotions. It is our job to do the best that we can with keeping the wolf as one of our state treasures. I also think that an advisory board needs to be set-up of ranchers, hunters, citizens, government agencies, animal environmentalists and etc. to advice. If cows, dogs and farm animals can be compensated then I believe that our state treasures, deer, elk, moose, wolves, cougar and etc. can also have a high rate applied to them and when they are poached then that rate along with any other fines would be given to the poacher to pay. This flat rate would then be put back into FWP funds for protecting our out of doors as well as compensation for when a farm animal is taken by a wolf. Rule this rationally, legally and scientifically. Let us all benefit by keeping wolves in our state and set an example for other states to follow. Keep wolves in Montana.

L0343: 1) Contingency - alternative #5 has best options for me. Permanent approach. Remain on federal list until more stable and larger population. Shared management under a cooperative agreement. Breeding pairs benchmark increased to 30. Cost shared perhaps 50/50 between FWP and USFWS. 2) Federal livestock rules until FWP has a stable proven management program. Do not feel comfortable with any wolf harvest ever. Livestock compensation - a shared responsibility - government and non-profit wildlife organizations.

L0345: 1) The Russell County Sportsmen's Association would like to be on the record as supporting alternative #2. 2) The Russell County Sportsmen's Association would strongly urge and request that a program of compensation for the public loss of a public resource, wildlife be developed to match the compensation program for private livestock losses. This could be increased access, improved habitat and more FWP law enforcement and field biologist staff.

L0004: 1) #4. This has the least amount of breeding pairs and the brain dead bureaucrats who shoved this down our throats will have to pay for it - not Montana residents. 2) Give FWP full flexibility - not limited for local concerns. The brain deads should fund a full compensation program for ranchers and all others concerned - we didn't ask for this BS.

L0014: 1) Contingency - alternative #5. Federal government rules of management and protection have resulted in viable populations of wolves in Montana. Prey (elk) management should be balanced with predator control. Montana should handle compensation to ranchers with a coalition of other concerned entities, i.e. Defenders of Wildlife.

L0058: 1) Alternative 2 gives FWP the more flexible manageable tools to manage wolves in the future. 2) Sports and landowner and property owners would have a say in the development of compensation. Federal agencies to pay their share in the future.

L0062: 1) #5 we need to move into the wolf plan with all bases covered and all problems addressed. Education and caution. #2 could also work. 2) I would drop the compensation, people need to be responsible for their pets and livestock, contact FWP or USFWS and come up with a plan together so they are able to manage their livestock as FWP and USFWS manage wolves etc.

L0080: 1) Alternative 1 because the breeding pair benchmark set in the other alternatives is arbitrary and capricious. Given the size of MT and amount of potential habitat, 15 packs is too few. There is no scientific justification for this number. 2) Develop compensation program. Assure funding.

L0100: 1) Alternative #2 leaning towards Alternative #3. Because of the 20 pack would allow landowners/ranchers more flexibility in dealing with wolves versus compensation, which doesn't seem like a sustainable solution. I also like the possibilities of hunting, any way the public becomes more part of the process, the more successful the wolf program will be.

L0111: 1) Alternative 2 - The 15 breeding pair benchmark is sufficient - 10 is too little, 20 is too many. I also appreciate the ability of the landowner to respond to conflicts. It is essential for the wolf to be delisted as soon as possible. 2) I feel once the wolves are delisted which provides for landowners to protect and defend private land there should not be a compensation program. Any type of a board or committee that would oversee losses and determine the "worth" of that loss creates a no-win situation. It will be difficult enough for FWP to financially manage the wolves without the added burden of raising money for compensation of losses.

L0120: 1) #4. I think federal compensation should be available for livestock. 2) Ten breeding pairs is more than enough wolves. Federal government should bear all cost of wolf management program.

L0141: 1) Alternative 2. It has the moderate approach that can be delisted and work. The wolf must be delisted. The livestock industry needs a compensation program that reflects the actual loses of the producer. Wildlife services must address depredation in a timely manner 24 hours or less. I very much like how the compensation questions were answered on the question and answer sheet. 2) I would like to see the definition of a pack made more liberal i.e. 4 animals in a family unit be a pack. We need full federal funding. Trapping needs to be allowed.

E5: 1. I would like to see Alternative # 3 adopted it combines the best of alternative 2&3 and increases the number of breeding pairs. I am concerned about compensation to stockgrowers as the plan does not make much effort in that area. I do not like Alt.# 4 because it seems to let stockgrowers shoot at will which I disagree with. All the plans have been well thought out and I commend FWP for your effort. 2. I would like to see State Federal and private groups combine efforts to compensate stockgrowers because I think they will not be as likely to shoot wolves thereby increasing the chances of there survival. Thanks for letting me participate.

E9: 1. I have not read the alternatives yet I will. My choice to manage the wolf would be any alternative that considers the wolf a predator outside of Wilderness and Park areas (open hunting/trapping) and regulated hunting is allowed within these areas to manage population. 2. Hound hunters are having their dogs slaughtered by wolves. The barking of a trailing dog is attracting the wolves. Stories of hunters finding their dogs brutally ripped to pieces are very common and on the increase. This is a regular event not an isolated few occurrences. Talk to the hunters especially in Idaho and Western Montana. I for one found more wolf tracks in Southwest Montana than I did lion tracks and not in the heart of the wolf recovery areas either.

These things are everywhere. It is only fair that the hound hunter be able to protect his hounds from wolves by any means necessary. If it is proposed that a rancher can protect a $400 calf or his $300 ranch dog then it is only right that a hound hunter be able to protect his hounds. A working hound dog has a value of $1 000 to $5 000 or more. Typically hunters will run 2 to 5 dogs. Wolves that kill an entire hound pack which is happening can conceivably destroy up to $20 000-$25 000 worth of dogs. Where our right to protect our more valuable property? Nobody is reimbursing us. Hound hunters as myself should not only have the right to protect our property we demand that right!

E18: 1. Minimum Wolf...Option number 4. (please read comments below) With human population constantly expanding and habitat diminishing all wildlife needs to be managed. Don't worry about the $800K it will take in politics to de-list the wolf for state management the wolves will kill more than that each year in wildlife and domestic species. Please do not try to sell the money argument. The thing that is wrong with minimal management and studies are this: Someone has to experience a LOSS before you can act. Since you and the Fed re-introduced the wolves YOU are libel for the damage they cause. Therefore you should financially compensate anyone who looses livestock to wolves. Also if a bighorn ram tag at auction goes for $100 000 each year...and the wolves kill 10 rams a year (which is conservative) then you are loosing 1 million dollars in wildlife just in sheep. Let hunters manage the wolves the same way they manage Black Bears and cougars. Further more the Grizzly should be de-listed as well and a handful of tags should be made available for Griz as well. In the year 2003...animal species need to be able to finance their own existence. They need to have value a financial asset not a liability! When the public finds out what a huge tax burden wolves are becoming you will over time reduce the value of these great animals and restore their turn of the century reputation of useless vermin.

E43: 1. Nothing. 2. Make sure that livestock owners are actually compensated without having to dam-near come up with video of the wolf killing livestock.

E61: 1. Alternative 2 gives landowners means to control (within reason) the safety of his livelihood and be compensated for losses. 2. Would riders and ranch employees who are responsible for livestock have the right to use kill permits as well as landowners since they would be likely to observe conflicts? I think that when livestock is killed injured or threatened the entire pack should be eliminated to prevent additional losses expense and time.

E93: 1. Alternative 2 Basically the reason I picked this alternative is because it gives F.W.P. the most flexibility and I believe they will need this with such an adaptable animal to try and manage. 2. Allow hunters to be the tool for controlling wolves as predation on deer and elk will mostly affect them. Try to keep most of our breeding pairs and packs in and around the Yellowstone and Glacier Park where hunting is not allowed and tourists can see the real effect of wolves on our environment after all it was they who wanted to see the wolf in it's natural environment. Fully funded by the Fed's defenders of wildlife should continue to fund with the Fed's as long as there's protection of any kind other than quota seasons for the wolf they should not be allowed to bow out of their share of responsibility. Defenders of Wildlife and other non-sporting entities such as photographers and those that would benefit from viewing the wolf should be allowed to provide funding such as sportsmen and women do thru licensing and permits to help cover added expense of managing wolves.

Economics / Livelihoods

Summary of Comments: These comments address the economic costs and benefits of having wolves in Montana, livelihoods, ecotourism, and fiscal impacts to FWP. Some comments express concern about the livelihoods of those individuals who may be negatively affected by wolves. Some comments speculate that wolf presence will hurt either Montana's statewide economy or local economies based on impacts to the livestock industry because of wolf depredation. Closely related comments predict negative economic impacts to local economies due to declines in expenditures for big game hunting because of declines in prey populations. Other comments tout the economic contribution that wolf restoration makes to Montana's statewide and local regional economies through tourism. Closely related comments suggest impacts to individual's livelihoods if the wolf management program is too aggressive. Some comments question the adequacy and completeness of the economic analysis. A few comments mention a concern that land management activities could be negatively affected by the presence of wolves.

Comments related to a compensation program for livestock losses are addressed under Compensation. Comments discussing costs to the State of Montana or FWP to implement the program are addressed in under Funding.

Response: Lacking the knowledge and expertise to address this issue in-house, FWP contracted with Bioeconomics Inc. to prepare this section of the Draft EIS. Bioeconomics Inc. is a private company specializing in the field of natural resource economics. Bioeconomics and FWP found that there are a great many theories and widespread speculation about the economic costs and benefits of wolf restoration, but few data exist pertaining to a state management program for a recovered population. For example, much of the economic analysis and information on the costs and benefits of wolf restoration pertains to the actual reintroduction effort in Yellowstone and central Idaho – not necessarily a long-term management program of a recovered, and hence, delisted species in Montana or elsewhere. Data simply are not available to address some aspects of this issue that FWP and Bioeconomics would have liked to address. Therefore, the economic analysis relied on the available data and published literature.

Bioeconomics and FWP limited the scope of the economic analysis to that for which FWP has legal jurisdiction and/or responsibility and to the issue areas and the outcomes which FWP would have some ability to influence, given differences in how the management program was implemented. Furthermore, the economic analysis provides a relative comparison

between the alternatives using estimates, rather than absolute values of economic costs and benefits. Again, this was due, in part, to the lack of relevant data.

In the preferred alternative, FWP and the Montana Wolf Management Advisory Council acknowledge that the economic costs and benefits of wolf restoration in Montana accrue to individuals or economic sectors differently. Some individuals or economic sectors may benefit while others may be harmed. Furthermore, benefits and costs seem to affect individuals more significantly, rather than an industry as a whole. Therefore, this disparity is addressed through the inclusion of certain management tools or strategies. FWP and the council also acknowledged that some economic sectors benefit from the increased tourism and visitation associated with wolf-viewing and tourists' perception of Montana as a wild and scenic place to visit. These benefits are acknowledged through the recognition in the preferred alternative that the gray wolf is a native species and that it will be integrated as a valuable part of Montana's wildlife heritage. However, some economic sectors may be negatively affected. Livestock producers and outfitters have expressed concern about that potential. Livestock producers may experience increased costs or direct losses due to wolves. FWP's preferred alternative includes tools to help mitigate for that. FWP doesn't have responsibility for the Board or Outfitters or land management agencies with regard to the outfitting industry. However, FWP does have authority for the variable priced licensing system for non-residents and for managing ungulate populations and hunter opportunity for both residents and non-residents. The preferred alternative seeks to integrate the management of large carnivore and ungulate populations while maintaining traditional hunting opportunities. Thus overall, awareness and sensitivity to concerns about economics/livelihoods are addressed in the preferred alternative by the management direction to integrate and sustain a wolf population within the complex biological, social, economic, and political landscape.

During the wolf recovery phase, USFWS indicated that restrictions on federal land management activities (e.g. logging or grazing) were not necessary for wolf recovery or long-term management. FWP agrees.

Representative Comments:

W51: Do not change the way we live to accommodate the wolf. If they survive great, but do not accommodate them at our expense.

W103: Economic values are different among people.

W260: Livestock producers ultimately pay for wolves.

W1068: Gardiner late hunt is economically important to Gardiner -- economically we are being hurt.

W1071: People who come to watch wolves spend a lot of money.

W1388: Alternatives are political – wolves will impact communities economically.

W1412: Need not just evaluate wolves. We need to evaluate the impacts of wolves on ranchers/farmers and sportsmen. That is more important to Montana and local economies. Find out why property is being sold and why they are going out of business.

W1343: Gardiner has tourists in the early spring now because of wolves – didn't before. Auction of wolf permit like moose or sheep.

W1405: Hunting success has gone down – effects especially non-residents. It will be a huge economic impact to Montana.

W1044: I am concerned about no hunters as a result of low elk.

W1104: I am a B&B owner and there needs to be enough wolves to support our livelihood.

W1107: How will wolf management reflect impacts to outfitters? We used to take out 30-35 hunters – this year we only booked 17 and reduced our prices.

W1120: Regarding compensation – what about an outfitter who loses business due to lack of wildlife?

W601: I am concerned that wolves will cause problems with infrastructure of state – loss of livestock producers and open space.

L0173: Wolves are an important part of a healthy ecosystem. Wolves are important to the economies of the Montana area. Wolves have received a "bum rap". They are not the huge predation problem they have been made out to be. Adopt a no-wolf-killing plan.

L0179: Add my support to the MSSA position. It is the most appropriate position for the state to take on wolf management. Wolves are going to decimate the elk and deer populations which will cause dire consequences in the states revenue through lost hunting license fees. Plus the large amount spent in the state by the local and out of state hunters themselves. Then there will be continued advancing livestock losses. Which will devastate another huge Montana industry. Plus the in and out of state hikers that will be afraid to venture into the mountains, more dollars lost. Montana and its citizens must come first.

L0190: Any wolf plan to introduce wolves into eastern Montana would be extremely detrimental to stock growers and landowners. Hunting is also a large factor in the local economy. The business that rely on the thousands of hunters that visit our area each hunting season would be severely affected by introducing wolves. Landowners that withdraw their acreages from the block management program and landowners that close private lands to hunting would greatly affect the economy of the central Montana area. We strongly urge no consideration be given to introducing the Montana gray wolf in eastern Montana.

L0191: I remain concerned that alternative 2 is unnecessarily liberal and encourage reconsideration of alt. 4. With a three state recovery area Montana's contribution to the recovery effort need no exceed 10 breeding pairs or 1/3 of the area goal. Adverse economic impacts would be minimized with lower sustained wolf population. Opposition from cattle producers would be minimized along with potential contention that may result between ranchers and sportsmen (landowner's proposal to withdraw from block management in "protest"). Somewhat deficient in its assessment of potentially adverse impacts to elk populations. 200 wolves consuming 7(?) elk apiece represents an economic impact that is not quantified in the EIS. Using a value of poaching violations, $1000 per elk, predation poses a potential economic loss of $1.4 million annually, lost hunter opportunities and revenues. Given Montana's rich and economically important hunting heritage, any serious threat such as a significant increase in predators deserves exacting quantification.

L0215: I strongly support Fergus County Commissioners resolution 6-2003, which opposes the establishment of wolves in Fergus County. Alternative #2 with exceptions that you: establish a zone for the wolf population and give landowners more flexibility in the central and eastern zones. I support actively managing wolves west of the line drawn on the map by Fergus county commissioners. Please add the wording in alternative #4 pg. 91, to alternative #2. Wolf distribution would be strongly discouraged in central and eastern Montana. They could be routinely trapped and relocated to western Montana, or removed from the population if no suitable release sites could be found. Agriculture is our top source of revenue in eastern Montana, along with revenue from hunting.

L0274: We do not want wolves established in Wheatland County. We feel that we need to protect Wheatland County's #1 resource: agriculture. Wheatland County's resolution #64 expresses our desire to prohibit the presence, introduction, or reintroduction of wolves within the boundaries of Wheatland County. It appears that Alternative #2 is best suited for Wheatland County. We believe that a zone needs to be established for the wolf population, and that landowners in the Central and Eastern Zones need to be given more flexibility.

L0302: Alternative #2 with some changes would be the best option. 12 Breeding pairs. Stop wolves from moving into new areas (central and eastern Montana). As an outfitter, farmer, rancher in N central Montana in the Missouri Breaks, I am of the opinion that wolves would hurt me severely financially. It is very important for me that wolves be held where they are now.

L0313: Every wolf pack that has come in contact with domestic livestock has eventually had conflicts resulting in direct or indirect losses to those livestock. Since the perpetuation of Montana's wildlife depends on the habitats of Montanans private lands we feel the following criteria must be incorporated into the wolf management plan for Montana. Wolf numbers must be the absolute minimum to satisfy relisting the wolf. Recognize the wolf is a predator and livestock producers must have the right to protect their livestock on private and public ranges, using preventive and reactive methods. Damage caused by wolves must cover confirmed ad probable kills and also all indirect losses form wolf conflicts. Compensation is not acceptable and should not release those responsible for the accountability of reintroducing the wolf and the damages caused by their actions. Management of the wolves should be directed to maintaining the minimum number of packs to prevent re-listing and also establish a maximum number of packs Montana has to tolerate and provide wildlife and livestock as its prey base.

L0050: 1) Alternative #3 more wolves promote healthier big game populations. They also create a more diverse scavenger community. More wolves generate tourism dollars unlike livestock industry which is dependent on government subsidies for its survival. More wolves fill a vital ecological niche that was destroyed because of cow ranching. 2) Manage wolves like other wildlife such as elk, bear and mountain lion. Provisions for killing of wolves by citizens should be clear and specific. Funding must be assured before the plan is finalized. Key areas of wolf habitat should be protected during the opening season, large areas must be maintained for both wolves and their natural prey free from disturbance by people.

L037: USFWS has spent millions to establish these wolves in Montana, and now that the wolf population is multiplying rapidly, they want to dump this mess on Montana. FWP proposes to accept this responsibility and this should be refused for the following reasons: 1) Money. Montana does not have $800,000.00 a year to spend on wolf management, and it certainly won't have the ever-increasing money needed as these wolves increase. Managing these wolves is not a Montana responsibility - it's a Federal responsibility. Until Congress passes laws providing money to fully fund that responsibility, all further planning is a waste of time. 2. Publicity. USFWS apparently killed at least a half dozen cattle-killing wolves in the last 12 months in Montana. Every year far into the future, more wolves have to be killed every year because they're attacking livestock. Our State spends a fortune every year trying to encourage tourism. What is the possible logic of allowing those advertisements to be offset by TV pictures of Montana officials "murdering" the wolves? 3) Wolves will decimate our big game. Big game hunting is Montana is a major economic and pleasure activity, both for locals and for out-of-staters. These ever increasing packs of wolves are going to decimate our deer, elk and moose, and our hunting economy will evaporate. 4 Let the USFWS keep the wolf problem. USFWS wants to give Montana control, but USFWS expects to continue to tell Montana how many breeding pairs we must maintain; when and under what circumstances Montana can allow a wolf to be shot, etc. If Montana takes over wolf management under any USFWS approved plan, USFWS will continue as the great father, disciplining Montana if any facet of our wolf management doesn't meet great father's requirements. Wolves so far the a USFWS problem and the wolves are rapidly multiplying and the problem is rapidly getting worse. Why should the State of Montana assume this problem? Why shouldn't this continue to be a USFWS problem and why shouldn't Montana make every effort to require USFWS to protect Montana's citizens from the depredations and losses these wolves are going to cause us as these wolves rapidly proliferate?

L0124: #3 is best. Wildlife are essential element of our culture. By maximizing wolf numbers, larger areas of habitat for all species will potentially be preserved. Livestock producers are a tiny part of the Montana economy and need to adapt to changing conditions in the same way that other businesses do. They do not need special treatment as long as they are able to defend stock on private land. 2) Remove the MT Dept. of Livestock from any role in wolf management. Managing predators to increase prey does not work, except in very localized areas, and should not be practiced generally. Public lands is virtually the only habitat left for wildlife. Livestock should be excluded for public land or at least not be protected from wolf depredation with lethal means on private land.

E15: 1. Our family has been using livestock as a tool to manage the health of the range resources we control in southwestern Montana and southeastern Idaho since the 1880's. Agrarian societies and wolves have never been compatible. This is why wolves were removed from agrarian communities in the United State and in the rest of the world. Wolves were pushed back into areas that were not utilized by livestock. The Endangered Species Act was used by extreme preservationists to bring the wolf back and cause land use changes. Much of the private land in the western United States is used for livestock production. When the wolf forces livestock off these lands this land will be sold to wealthy recreation interests and the wildlife habitat will be fragmented beyond recognition and the openness of the West that draws people will be lost. Most of the public lands are intermingled with private lands that contain the most productive and valuable habitat. My comments on the preferred alternative are being made recognizing the above realities and the past inability of the Montana Fish Wildlife and Parks (MFW&P) to control wildlife numbers and failure to recognize and adequately compensate landowners for their contributions to wildlife habitat and the coffers of this state. These comments are being made on the Preferred Alternative as presented in the Executive Summary. Wolf Management The wolf will fall under the same category as the black bear and mountain lion yet presents a much greater problem than these two species to the game herds and the livestock industry. All a wolf needs to survive is something to eat. The wolf will be much more difficult to control. To suggest that they can be managed the same is unrealistic. The wolf should be put in a separate category that recognizes that he is nature's primary killing machine and design tools that can address and compensate for his impact. The MFW&P is going to ask for compensation for an illegal harvest of a wolf but refuses to pay for livestock taken by a wolf or ask for compensation for wolf takings of other wildlife. This needs to be addressed. Number of Wolves in 2015 How can we depend upon these numbers? I well remember the numbers proposed for the MDFW&P elk plans. The plan needs a mechanism that will make MFW&P liable to the hunter and the livestock industry if these numbers are not held to. Distribution in 2015 All distribution will be localized and as the prey base of wild ungulates decreases wolf will be forced to target livestock and pets on private lands and in more populated areas. If statewide distribution is being considered this plan is much bigger than being portrayed. We need specific population areas and numbers otherwise we will have more numbers than needed to satisfy the USFW and the MDFW&P have a dismal record in managing numbers especially elk. Wolf Habitat Connectivity Land Management When the wolf was first being introduced the USFW Service met with the ranchers and assured them that the wolf had limited habitat requirements. This heading supports the preservationists' goal in using the wolf as a takings weapon: "Connectivity assured through legal protection". It looks like the MDFW&P is going to use the wolf to manage land. This is outside their legal authority but is increasingly becoming their intention. This section of the plan should be dropped because the nature of the wolf makes it unnecessary. Private Property the implications of having wolves versus other publicly-owned wildlife on private land is not comparable. One must understand that the wolf is the ultimate predator whether classified as such or not. Once the wolf is delisted it becomes the responsibility of the State of Montana and managed by the MDFW&P. Forcing the private landowner to accommodate a wolf limits his ability to use his property as he wishes. This is a takings and since the wolf is delisted and Montana is responsible Montana will incur tremendous liability. This liability must not be accepted by Montana in this plan and the federal government and/or the successful petitioners must be held responsible. This issue could break the state of Montana. Compensation As discussed under private property when the wolf is delisted it becomes the responsibility of the State of Montana. Originally the wolf was eliminated from Montana because it was not compatible with the other land users. This was a cooperative program with the state. The wolf is the supreme predator and cannot be compared or treated like other predators or game animals. As wildlife numbers decrease or move onto private land for security the wolf will follow and the numbers of livestock losses could explode. It is imperative that the state of Montana and/or the federal government be held responsible for the total costs of livestock losses. This will assure that Montana and the federal government will responsibly manage this negative impact of wolf reintroduction. The rancher already supplies a big share of habitat and feed for the state's wildlife are we also obligated to supply the meat to support the wolf? All livestock losses from wolves exceeding that predicted in 2015 under the preferred alternative in table 3 should be paid by the state or federal government. Economics Livelihoods This section is poorly addressed. The potential economic impact to livestock operations and the resulting change in land ownership patterns is immense. No attempt to understand the current financial stress of the public land livestock industry is apparent in this plan. No guarantees are made as to the efficacy of the plan to control wolf depredation. The private landowner is left to fend for himself with few tools. No consideration has been given to the impact to Montana and wildlife habitat as ownership patterns change due to the loss of a viable livestock industry. This wolf management plan could directly contribute to these potential changes. Takings of private property private property rights and livelihoods is generally being ignored. This section needs to be expanded. MEPA NEPA REQUIREMETNS All the ramifications that this Wolf Conservation and Management Plan will have on the livestock industry landownership patterns county economies the support of the county infrastructure other wildlife and hunting opportunities and subsequent revenues have not been addressed to the extent required by MEPA and NEPA. What is especially of concern is the unwillingness of the MDFW&P to accept responsibilities of the management of the wildlife under their direction and mitigation for the damages and impact cause by this wildlife. The politics of the Endangered have the potential to destroy all that we have worked for in Montana. It is important in this plan to force those responsible for this dilemma to mitigate the consequences. This is the only way we are going to stop this madness that will ultimately end up with single use of the resource by those who refuse to accept the responsibility of ownership. 2. see above.

E82: 1. One of Montana's largest dollar based business is hunting. I am in favor of alternative No. 4. If there was a choice for going back to the way it was prior to the introduction of wolves that would be my choice. Montana needs to take control of it's own destiny and protect the hunting heritage that we have today before it is too late. There has already been a reduction in hunter opportunity in the hunting districts around the park and it wont be long before it effects other parts of the state. 2. Delist the wolves and let the state of Montana regulate them with no help from the fed's.

E92: 1. The best choice and the one which I ask FWP to adopt is Alternative 3. The reason is that it insures the highest number of breeding pairs of all the 5 alternatives being considered by FWP. Alterative 3 best represents the chance for Montana to have a healthy and viable population of wolves. I believe it is critical that the State of Montana have the largest number of wolves feasible for the following reasons: 1. Wolves promote healthy big game populations and cull the weakest from among the ungulate herds. This fosters better big-game populations. 2. A higher wolf population means an increase in tourism and this promotes the State's economy. There is ample evidence that this will occur by virtue of the experience seen in Yellowstone National Park. 3. According to the 2002 Montana Agricultural Statistic Service report wolves are responsible for less than 1% of all livestock losses in the state. For the past 7 years over twice as many sheep have been lost to turtling (which as I understand it means rolling over in the rain and not being able to get up than have been lost to wolves. Wolf predation on livestock represents less than one-thousandth of one percent of the total number of head in Montana. 4. Increased wolf populations promote a better balance in the carnivore community as evidenced in Yellowstone Park. In Yellowstone the presence of wolves has resulted in a more diverse predator and scavenger community. 2. Alternative 3 could be improved by increasing the number of breeding pairs upwards from the 20 in Alternative 3 to 25 pairs.

Habitat / Land Management / Connectivity

Summary of Comments: These comments address the need for wolves to move freely through Montana, within the tri-state area, and across the international border and question how and where this will be accomplished. Some comments also address whether or not there is a need (or support) for motorized travel restrictions or localized area closures where wolf packs establish den or rendezvous sites – some indicating yes and others indicating no.

Response: Ungulate distribution and human settlement patterns largely define wolf habitat. FWP has limited jurisdiction over habitats on lands for which it does not have a contractual interest or fee title. Nonetheless, FWP, charged with perpetuating viable wildlife populations, has a keen interest in habitat issues. FWP works with federal, state, private and corporate land managers on issues of mutual interest for the benefit of all wildlife species. FWP and private non-governmental organizations have been active in working with land managers on behalf of wildlife habitat and specifically on elk security. Indeed, these efforts have influenced land management in some cases and positive benefits for wildlife have been realized. In addition, FWP works cooperatively with interested private landowners and livestock producers to improve vegetation or other habitat features for wildlife and at times, working collaboratively to mitigate wildlife use of those lands.

FWP ungulate programs link habitat and population management through hunting and by collaborating with private landowners and habitat managers of other agencies. In this way, FWP takes an important habitat need of wolves into consideration. In its downlisting proposal, USFWS (2000) concluded that there were no foreseeable habitat related threats or reasons to suspect a significant decline in ungulate populations that could jeopardize a recovered wolf population. FWP agrees with this assessment, but will remain an advocate for wildlife habitat.

The preferred alternative did not recommend designating specific habitat corridors, travel restrictions, or area closures. USFWS determined that they were not necessary to restore the gray wolf in Montana and the northern Rockies and they should not be necessary to conserve and manage a recovered population, so long as other mechanisms adequately regulate human caused wolf mortality. Because the gray wolf is a highly mobile, habitat generalist, specific habitat designations would be impractical. FWP does acknowledge that specific areas closures may be warranted under certain conditions and will explore those management options collaboratively with the land managing authority. The reader is referred to Appendix 1 of the Draft EIS (pages 25-27) for additional supporting scientific literature.

Representative Comments:

W628: would like to see management based on viable habitat rather than #s, protection of habitat; identify core areas and manage for them.

W1187: Habitat connectivity is essential, nothing in the plan addresses the future relative to habitat issues, such as more “designated wilderness.”

W633: Habitat for wildlife, not just wolves is a key component

W744: Improvements – 1. 20 breeding pairs is a better number. 2. Need to have basic habitat protections i.e. denning areas at critical times of the year will get more protection. 3. Need indications that wolves pose immediate threat. No random shooting of wolves.

L0230: Their presence in MT contributes greatly to our states "wildness" image which is a lure for many tourists. Wolves also play an important part in an ecosystem. Other endangered predators are benefited. We do not feel there is a need for setting artificial limits on population or location of wolves. It would be a tragedy for all that's been achieved to be lost if the future management plan proved too stringent and restrictive on their populations. Their recovery is still tenuous, too many human caused mortalities or disease could put their recovery in jeopardy that is why we are convinced of the necessity of implementing alternative 3 which calls for the benchmark of 20 breeding pairs. Wolves are still a species in need of management, alternative 3 provides the protection they still must have. Killing of wolves should be precise and unequivocally spelled out so there are no gray areas, permitted only if it poses an immediate threat to people, pets or livestock. Key areas of wolf habitat secured from inordinate human disturbance during denning season. Long term wolf conservation must be the goal of this new plan. Before it is finalized funding for state wolf management must be assured.

L0319: The department agrees that the long-term future of wolves in Montana depends upon carefully balancing the biological, social, economic and political complexities of wolf management. Further, it is also DNRC's view that it is appropriate for FWP to develop a comprehensive management program. The FWP preferred alternative appears unlikely to create appreciable conflicts with our legal mandate to produce revenue for school trust beneficiaries and we support selection of this alternative. The department also acknowledges and concurs that Alternative 5 is reasonable consideration given de-listing uncertainty. The preferred alternative is highly compatible with DNRC's forest management direction to manage for healthy and biological diverse forests and recently adopted Forest Management Rules. In particular, the DNRC supports the FWP's position that since specific habitat corridors, travel restrictions, or area closures were not necessary to restore wolf populations they should not be necessary to conserve and manage a recovered population. The alternative also provides important considerations useful for DNRC's ongoing development efforts for an HCP to

address forest management activities on forested school trust lands. With ongoing state budgetary considerations we acknowledge the need to seek considerable funding for long-term monitoring and management need.

L0327: GYC supports and amended alternative 3. We are supportive of many of the provisions in alternative 3, including the fact that there are no artificial limits on wolf numbers and distribution. This most closely squares with the way that other wildlife populations in the state are managed. We also appreciate the fact that this alternative changes the definition form packs to successfully breeding pair. This measure will more adequately and appropriately measures reproduction than defining goals through pack activity. We would like assurances that the entirety of the program be funded prior to its implementation. We are concerned that the state could end up in a situation where the plan is only partially funded, and some of the more important components of the plan, such as the I&E work, is not completed. GYC supports the notion of a federal program that would fund recovery activities for both grizzly bear and wolf recovery, and we urge the state to aggressively pursue that program in coordination with the other two states. We would like to see a strong commitment to working closely with the states of Idaho and Wyoming in the context of implementing the state plans in a coordinated fashion. Because this is one population, which spans three states, close coordination between management activities in each state will have a profound impact on management. We are gravely concerned about the direction that Wyoming's draft plan has apparently taken. We appreciate the role that the state of Montana has played in this controversy. We strongly urge the state to keep up these efforts, as Wyoming's plan as currently written is biologically and legally insufficient. We urge a strong coordination function between the states, tribes and federal agencies. This could take the form of, at a minimum, an annual coordination meeting where habitat and populations issues can be addressed. This will also provide an opportunity for members of the public to address specific concerns to the agencies and learn current status of the wolf program. Appreciate the fact that the DEIS stands by the need to protect wolf habitat, and highlights the need for connected populations. We also understand that the state has a limited legal role in management of Federal lands. However, it is clear that the state has a great ability to influence decisions regarding to wildlife habitat on federal land. We would like to see some specific language in alternative 3 that commits the state to a strong effort to protect key wolf habitat and linkage areas. We also agree with the state's proposal to allow wolf dispersal through natural means. We do not at this time favor human interference in wolf dispersal, either through augmentation or premature removal. Important that the allowance of permitted citizen take of wolves be assessed along with overall population status. We urge that private take of wolves be limited to killing a wolf when it poses an immediate threat to livestock until the population goal of 20 breeding pair be met. We also ask that any wolf kill permits be limited to offending animals. In addition, it is critical that non-lethal control methods be emphasized. While we do appreciate this provision in alternative 3, we would like to see a strong commitment to a step-down process with the first series of actions focused on non-lethal means with lethal take as a last resort. Threatening to kill a person or livestock. We ask that the latter category be clearly denied so that wolves are only taken in those situations where it is clearly warranted. Support alternative 3's target of 20 breeding pair as a requirement to transition from conservative to liberal management. Critical that the state maintain its commitment to a well-distributed and biologically connected wolf population. Wolf distribution should be a primary consideration when the state considers control or removal. Alt. 3 drops the notion of a compensation program. Instead of dropping the idea altogether, we urge the state to hold it open as an option for addressing verified losses. We do support the notion of preventative action that will minimize losses. However, we feel that the state should still consider a compensation program for verified losses. GYC strongly supports the state's commitment to education related to living with wolves ad we also emphasize the need for long term strong enforcement related to wolf management.
We are greatly concerned about the continued reduction of multiple-use, motorized access and motorized recreation opportunities on public lands an feel that this trend is grossly out of step with the needs of the public. The concept of non-use or limited-use of all public lands is not in line with the needs of the public and the laws governing these lands. The project lands were designated as multiple-use lands. Management for multiple-use is responsive to the needs of all citizens including motorized recreationists. We are concerned that the Montana Wolf Program will be another initiative used to close more public lands to the majority of public visitors. The trend of closures after closure and the associated cumulative impact are no longer acceptable. Motorized access and motorized recreation opportunities are very important to our group and many other visitors. We request that all reasonable motorized access and motorized recreational opportunities within Montana remain open to the public and that the Montana Wolf Program not contribute to the cumulative impact on public access and recreation.

L0355: We are greatly concerned about the continued reduction of multiple-use, motorized access and motorized recreation opportunities on public lands an feel that this trend is grossly out of step with the needs of the public. The concept of non-use or limited-use of all public lands is not in line with the needs of the public and the laws governing these lands. The project lands were designated as multiple-use lands. Management for multiple-use is responsive to the needs of all citizens including motorized recreationists. We are concerned that the Montana Wolf Program will be another initiative used to close more public lands to the majority of public visitors. The trend of closures after closure and the associated cumulative impact are no longer acceptable. Motorized access and motorized recreation opportunities are very important to our group and many other visitors. We request that all reasonable motorized access and motorized recreational opportunities within Montana remain open to the public and that the Montana Wolf Program not contribute to the cumulative impact on public access and recreation.

Monitoring

Summary of Comments: These comments address how and at what intensity wildlife managers will monitor wolf populations, pack sizes, pack locations, locations of individual wolves, and the status of prey populations. Some comments say that the proposed “social group” definition is not stringent enough whereas other comments encourage FWP to use the more general definition of “social group” at the outset rather than the federal recovery breeding pair definition. Some comments say that indicate that the Monitoring section of the preferred alternative did not contain enough detail on methodology.

Response: Under the preferred alternative, FWP takes on the primary responsibility to monitor the wolf population, although collaborative efforts with other agencies, universities, and other interested parties will be important. FWP will coordinate with adjacent jurisdictions to monitor boundary packs, whether tribes, NPS, other states, or provinces. This type of coordination already occurs for other wildlife species. FWP intends to work with Idaho and Wyoming to clarify which state counts which wolf packs within the context of their state’s management plan so that all packs count toward

the tri-state recovery requirement and that individual packs are not missed or counted twice. Furthermore, FWP clarifies that boundary packs should always count toward the 30-breeding pair total for recovery and delisting purposes and that management authority and responsibility are actually shared between Montana and its neighbor, whether state, federal, provincial, or tribal. For the purposes of Montana's adaptive management program and contribution to the tri-state total, FWP will tally breeding pairs that den within Montana's state boundaries. If the actual den site is unknown, Montana and the adjacent state could seek an agreement on how the pack would be counted, using professional judgment or the assignment given by USFWS at the time of delisting.

As described in the preferred alternative, FWP will estimate wolf numbers and pack distribution, document reproduction, and tabulate known mortality. FWP will also tabulate the number of breeding pairs meeting the federal recovery definition. Ecological understanding will also stem from documenting territory boundaries, the locations of wolf den and rendezvous sites. While the monitoring program will track specific parameters and trends, wolf monitoring data will also be interpreted within the context of other wildlife management objectives related to prey species. The monitoring program will balance scientific precision with cost effectiveness. While telemetry is expensive, it will be an important tool in FWP's monitoring effort.

FWP will use a variety of tools including radio telemetry and non-invasive techniques to gather data on the wolf population in Montana. For additional discussion on monitoring protocols, the reader is referred to the Monitoring sections in Chapter 3 and Appendix 1 in the Final EIS. Those pages are from the Wolf Management Planning Document based on the work of the Montana Wolf Management Advisory Council. In choosing the Updated Council Alternative as the "preferred" FWP is endorsing the work and recommendations of the Council.
Additional language has been added to the Monitoring section of the Preferred Alternative to help clarify and address comments regarding the monitoring program and the proposed "social group" definition vs. federal recovery definition breeding pairs.

Representative Comments:

W29: How are state line packs counted and by whom?

W346: Breeding pair numbers should not be the only criteria; should have a benchmark total number of wolves.

W335: Do total wolf numbers include National Park wolves?

W599: It will take a lot of money to monitor packs.

W1290: Average pack size needs to be addressed (4vs. 20) – definition of a pack.

W1228: Concern over how breeding pair is defined and utilized – does not take into account the number of wolves in an area or the biology of wolves – e.g. lose one alpha male or female in the fall becomes not a breeding pack even through likely a new mate will be secured and new pups produced the following spring.

W1384: Concerns about biologist work load – not in the field to monitor wolves.

W1464: Get private groups, university professors and students involved in collecting information on population numbers and how to discourage wolves before they become a problem.

W1383: On monitoring, do you give accreditation to private sightings, information? Alternative #2 – but needs to improve monitoring to include private input.

W96: Could be more or less than counts estimate.

W243: If wolves are not radio-collared, how do we know how many are out there?

W438: State needs to be responsible to landowner to notify when wolves in vicinity.

L0248: Thank you for the opportunity to comment on the Montana Gray Wolf Conservation and Management Plan. The MFBF has been involved in the wolf introduction and management since the beginning of the program and took an active role in the development of this plan. Our comments consist of some general observations based on policy that is developed by our members and some specific comments on the various alternatives.

Montana Farm Bureau members have developed two policies over the past several years that drive our position on wolf management. Those policies are, 1) We support the removal of wolves from the Endangered Species list and placing them under the supervision of the states where they are found, and 2) We support compensation for probable wolf damage by the appropriate state or federal agency. Under these policies Alternative #2, 4 and 5 would appear to be acceptable to MFBF. Our comments will be limited to those alternatives.

Alternative #2

Alternative #2 seems to be the most likely of the acceptable alternatives to remove wolves from the endangered species list so would be the alternative that MFBF supports.

Alternative 2 states, "As the Montana wolf population becomes more established, through the monitoring program, Fish Wildlife and Parks (FWP) will evaluate a more general definition of a social group (four or more wolves traveling in winter) as a potential proxy for a breeding pair." At what point would the more general definition apply? These small "social groups" are sometimes the most detrimental to livestock producers. We would prefer to use the social group designation from the outset.

Alternative 2 states that, "Some funding could come from monies FWP already provides to Wildlife Services for animal damage management in cooperation with Montana Department of Livestock." We are concerned that these monies do not in any way affect the current program dealing with coyotes and would like some assurance that the money referred to in the plan are new dollars dedicated to wolf management.

This alternative also addresses the need for a compensation program. Although we support a federally funded compensation program Montana's top priority should be getting federally funded management programs in place that give livestock producers the flexibility to address problem wolves in a manner that best protects them or their property and yet assures that they remain off of the endangered species list.

Alternative #4

Alternative 4 on its face seems the best solution for wolf management from the livestock producer aspect. Our apprehension is that the cost of this management plan could far exceed the cost of Alternative #2. This alternative proposes that management be turned over to the state and yet the federal government would be expected to entirely fund the program. In addition wolf numbers would be managed on the knife-edge of the requirements of de-listing so unanticipated occurrences such as disease, drought or hard winters could tip them back into the endangered listing. If the USFWS does accept such a plan we are stuck with management continuing under the ESA and/or substantial additional cost to the state.

Alternative #5

Montana Farm Bureau and other livestock organizations worked very hard and in good faith to develop a plan that they feel addresses their concerns and yet gives pro-wolf advocates the comfort that the species will continue to exist on the landscape. All of this work could be negated and the entire process placed in jeopardy if lawsuits are allowed to derail or significantly slow the implementation of wolf management. It is vital that Alternative #5 be in place as a fall back plan in the event the above-mentioned lawsuits occur and de-listing is held up for an indefinite period of time in the courts.

We appreciate the hard work that has gone into the development of the Montana Gray Wolf Conservation and Management Plan and thank you for the opportunity to comment. We look forward to working with the Montana Department of Fish Wildlife and Parks in the future in moving forward the wolf de-listing process as expeditiously as possible.

L0317: Alternative #2 is the best alternative to remove wolves from the endangered species list. Some items of concern though: How are transient packs, moving in and out of Idaho and Wyoming and Canada, to be treated in counting? When will the more general definition of a social group as a potential proxy for a breeding pair apply? These social groups are sometimes the most detrimental to livestock producers. The use of the social group designation should be at the outset. Funding should be from new dollars dedicated to wolf management. The compensation program is not a good plan when getting federally funded management programs in place that give livestock producers the flexibility to address problem wolves that best protects producers and their property and assures that wolves remain off the endangered species list is better. It is vital that alternative #5 be in place as a fall back plan when lawsuits are filed that would allow derailment or significantly slow the implementation of wolf management.

E91: 1. I support Alternative 4. I believe this alternative more accurately recognizes the economic impact wolves have had on agriculture hunting and other land based businesses that have formed Montana since its statehood. While expensive I believe a program similar to the National Park Service's fee-demo program would fully fund both management and compensation to livestock producers. If all visitors to Montana's national parks/landmarks/national wildlife refuges (including Yellowstone National Park which is in all 3 recovery states) were assessed a wolf management fee of $2-$5 Montana would not have to pay for management. Remember it is the public that wanted wolves in the first place. It is my belief that this public were largely visitors to Yellowstone National Park and Glacier National Park. Make them pay for recovery. 2. In developing alternatives I believe Montana spent a lot of time developing alternative 2 but relatively little time in developing alternative 4. I would like to see alternative 4 integrated with many of alternative 2's characteristics including flexible management hunting and restitution. I think the final EIS should recognize that there are many packs not yet located or found. For this reason while alternative 4 sets a 10 pack minimum there are probably at least 5 more packs undiscovered. I believe every effort should be made to ensure that there is not an excluded zone surrounding Yellowstone National Park where kill permits cannot be issued or wolves cannot be harvested by licensed hunters/trappers. I don't think we should continue to count packs by pack numbers. We need to devise a more realistic method of counting wolves. Many packs when in wildlife rich areas generate 2 or 3 litters a year. Thus a pack can sometimes have 25-40 wolves. This could be the size of 5 or more smaller packs. Also by current pack standards pack consists of an Alpha Male Female and two pups of the year. Often the alphas are killed another beta animal steps in as Alpha. Thus by counting wolves rather than packs we more reasonably ensure the number of wolves.

Other Wildlife

Summary of Comments: These comments address wolf interactions with other, non-ungulate wildlife species (e.g. ESA-listed species, other carnivores). Some comments mentioned concerns about the effects of predation on prey species by other carnivores (lion, bear) in addition to wolves. Another comment points out additional published literature on wolf-coyote interactions that FWP was not aware of.

Response: Despite volumes of published literature on gray wolves, there is remarkably limited evidence on the precise nature, degree, and mechanisms by which wolves affect and/or interact with their ecosystems, ecosystem functioning, other species of animals, or vegetation communities. The "Affected Environment" description in the Draft EIS describes some research results from the northern Rockies. Current ongoing research in Yellowstone National Park and elsewhere will help resource managers improve their understanding of these complex relationships.

Under the preferred alternative, the gray wolf would become integrated into FWP's wildlife management program as the species integrates itself back into the natural environment. Overall, FWP's program seeks to conserve and manage wildlife from an ecological point of view rather than focusing on single species. Recognition of ecosystem functioning is also important. The adaptive management framework will help FWP incorporate new knowledge into the management program as it becomes available.

While FWP is moving toward an ecologically based wildlife management program, preparing individual species management plans will still serve as an important systematic and strategic way to consider a species and its management within the broader context of its environment and the management objectives of other species. FWP completed a management plan for grizzly bears in southwestern Montana and is working on a plan for the rest of the state. There are statewide management plans in place for black bears and mountain lions. Revisions of the black bear and mountain lion management plans are scheduled after current research studies on these species are completed between 2007 and 2009.

Representative Comments:

W67: Would be nice if the plan specifics included other predators, not just wolves.

W303: Mountain lions are additional predators.

W210: Coyotes vs. wolves – wolf is a killer, coyote is a scavenger.

W739: I think the wolf population should be considered in controlling other predator populations like coyotes/lions.

W752: Since wolves have been introduced into Yellowstone, the other species have enhanced overall.

W940: Wolves have effects on other predators.

L02The Montana Chapter of The Wildlife Society welcomes the opportunity to provide comments on the draft Environmental Impact Statement (EIS) for the Montana Wolf Gray Wolf Conservation and Management Plan. Overall, the EIS is well written and the alternatives appear to capture the spectrum of public concerns. We would like Montana Fish, Wildlife, and Parks (FWP) to consider Comments on Chapter 2
•Wolf diets were specifically addressed in a recent publication that may help address the food habits section. This is also relevant to paragraph 2, page 38, for proportions of each ungulate species in wolf diets. See W.M. Arjo, D.H. Pletscher, and R.R. Ream. 2002. Dietary overlap between wolves and coyotes in northwestern Montana. J. Mammalogy 83:754-766
•Interactions with other carnivores: Although this chapter explains some of the research on interaction of wolves with other predators, when it comes to describing the effects on wildlife in the alternatives, some things are overlooked. This is clarified more according to the alternatives. In addition, a peer-reviewed reference for wolves killing coyotes can be found in Arjo, W.M. and D.H. Pletscher. 1999. Behavioral responses of coyotes to wolf recolonization in northwestern Montana. Canadian Journal of Zoology 77:1919-1927.
Comments on Chapter 3
•It is understood that in writing an EIS you have to address something close to a "No action alternative", but is Alternative 1 even plausible? Once the wolf population reaches the management goal, doesn't USFWS have to start delisting and at least downlisting? Hasn't the process already started? If the delisting occurs, will this alternative stay in the wolf EIS?
Alternative 2
•Although Alternative 2 is a summary of the Wolf Planning Document, you might want to consider adding some more information on methodology (i.e. determining wolf numbers), within the text of Alternative 2. There is a concern with relying on track counts for determining wolf numbers. It appears that this will be the main method in determining wolf populations. Some collars may be maintained from previous research projects, but no additional effort will be made to monitor packs. So much variation occurs when tracking animals including wolves following in footsteps so that one track is actually 10, the same wolves covering kilometers of land which may run the risk of being counted twice, or a bad winter (like 1994-95) with little tracking snow. It would be beneficial to see some more detailed methodology put in if possible.
•Pg 73, paragraph 2: Unclear what numbers actually define when wolf numbers need to be regulated or are no longer "in need of management". The paragraph above states 15 breeding pairs, but for how long? Or is it management on a year-to –year basis?
•The explanation for how the three states were going to count the boundary packs was well done. Again, without collars, how are dens going to be documented, and hence reproduction?
•Pg 74, paragraph 4. The last two paragraphs in this section might be better up front. On page 73 legal harvest is mentioned, and then the sections reverts back to stating that it is illegal to kill wolves. This is a bit confusing.
•Prey populations: Will ungulate herds be monitored to determine cause of death? Otherwise, with an increase wolf population, comes additive mortality to ungulates. If ungulate populations decrease, what is to say that lion or bear populations, or a combination of all predators is really the cause?
•Monitoring: Same concern as previously voiced on how to adequately monitor natality and mortality.
•Other wildlife: In this section should the effects on lions (hunted species) and grizzlies (threatened species) be more fully explored? For instance, the work in the North Fork documented wolves killing cougars, which may cause a decline in the population and therefore less available cougars for hunting. In addition, there are a couple of instances where grizzlies no longer hibernated because of available wolf kills.
Alternative 4 -- •Wolf management, Numbers, and Distribution: In Alternative 4 artificial zones are established to prevent colonization of eastern Montana (because of possible increased livestock conflicts?). Without a map of the regions to know where the boundaries are, does this still maintain an adequate corridor between Montana, Canada, and Wyoming populations?
Comments on Chapter 3
Alternative 2 -- •Livestock depredation: This notion of wolf populations growing at a "higher" or "lower" rate, does that just mean when they meet the 15 breeding pair requirement?
•Fiscal Impacts: Revenues form a regulated harvest may take awhile before available. Hopefully other monies can be found in the mean time.86:

E23: 1. I support Alternative 3 because it makes the wolf a species in need of management providing full legal protection for wolves. It has the highest population benchmark before aggressive management tools are used set at 20 breeding pairs. It sets clear and specific rules for when citizens can kill wolves that are threatening people pets and livestock. 2. Please consider these statements in choosing your alternative. Wolves promote healthy big game populations. They generate $20 million in tourism. Wolves manage coyote and other predator numbers and they cause less than one percent of all livestock losses annually. Thank you.

E96: 1. The best choice and the one which I ask FWP to adopt is Alternative 3. The reason is that it insures the highest number of breeding pairs of all the 5 alternatives being considered by FWP. Alterative 3 best represents the chance for Montana to have a healthy and viable population of wolves. I believe it is critical that the State of Montana have the largest number of wolves feasible for the following reasons: 1. Wolves promote healthy big game populations and cull the weakest from among the ungulate herds. this fosters better big-game populations. 2. A higher wolf population means an increase in tourism and this promotes the State's economy. There is ample evidence that this will occur by virtue of the experience seen in Yellowstone National Park. 3. According to the 2002 Montana Agricultural Statistic Service report wolves are responsible for less than 1% of all livestock losses in the state. For the past 7 years over twice as many sheep have been lost to turtling (which as I understand it means rolling over in the rain and not being able to get up than have been lost to wolves. Wolf predation on livestock represents less than one-thousandth of one percent of the total number of head in Montana. 4. Increased wolf populations promote a better balance in the carnivore community as evidenced in Yellowstone Park. In Yellowstone the presence of wolves has resulted in a more diverse predator and scavenger community. 2. Alternative 3 could be improved by increasing the number of breeding pairs upwards from the 20 in Alternative 3 to 25 pairs. Also that trapping of wolves be absolutely prohibited because it is so grossly inhumane.

Hybrids

Summary of Comments: These comments identify a concern about whether captive wolves or wolf-dog hybrids jeopardize human safety if they are released or escape from their owners, erode public tolerance for wild wolves if someone has an encounter with an escapee, whether hybrids or captive wolves pose a risk to a recovered wolf population. Most of the comments FWP received on this issue support stricter laws and oversight to further regulate or outright ban ownership of captive wolves or wolf-dog hybrids.

Response: Montana law assigns regulatory oversight of wolf-dog hybrid or captive wolf ownership to FWP. It is legal to possess captive wolves and wolf-dog hybrids in Montana. Citizens may keep them as personal, private pets without a permit. Citizens wishing to public display captives or wolf-dog hybrids or to attract trade must have a permit from FWP. Montana statutes (87-1-231) and administrative rules require the permanent tattooing of any wolf held in captivity, where "wolf" means a member of the species Canis lupus, including any canine hybrid which is one-half or more (>50%) wolf. Owners are also responsible for compensation and damages to personal property caused by any wolf that is held in captivity or that escapes from captivity. FWP Enforcement Division maintains the database of tattooed captive wolves and wolf-dog hybrids.

As stated in the preferred alternative, FWP does not seek to further regulate the ownership of captive wolves or wolf-dog hybrids at this time. However, in the future, the State of Montana may seek that statutory authority in the interest of public safety. FWP outreach efforts will include identification techniques to help citizens discern a hybrid or captive wolf from a wild wolf. FWP biologists or game wardens will assist local authorities in making that determination and provide the appropriate management support to local authorities.

Representative Comments:

W266: For hybrid wolves, the breeders should need to buy a license and animals should be marked by an ear tag.

W1307: Under all alternatives, no tolerance for wolf hybrids.

W1346: I like Alternative #2 with 20 pairs or Alternative #3 with compensation. Need to deal with hybrids.

L0206: Alternative #2 will not only insure the future of wolves in Montana but also protect user groups with interest that may conflict with wolves, from undue harm. Budget for managing wolves is unrealistically high. We would like to know what FWP plans to do if money cannot be obtained from private or federal sources. The inadvisability of private hybrid ad wolf ownership should be addressed in your public outreach programs including plans to prohibit such ownership through regulatory means if problems involving these animals running loose continue. Uncomfortable with compensating livestock owners for depredations, they are not compensated for deaths caused by other predators. Should be linked to owners who employ proper husbandry practices.

Human Safety

Summary of Comments: These comments identify Montanans' concerns about the safety of their children, pets, and their livestock in the presence of a recovered wolf population. Many comments also specifically mention wolf proximity to rural homes or out buildings and wolf habituation as a concern.

Response: In recent years, FWP has taken a proactive approach in helping people learn how to live, work and recreate in wildlife habitats. Other state and federal agencies have done the same. Increasing numbers of people are living within the urban – wildland interface where a potential for conflict with a wide variety of wildlife species exists. Through policy development, public outreach and technical assistance to landowners and recreationists, FWP is working towards mitigating those risks to the extent possible. The reader is referred to pages 84-85 in the Draft EIS for the specific management responses. The spectrum of management and public outreach activities to ensure public safety in Montana addresses these comments.

In accordance with Montana statutes, FWP and the FWP Commission are authorized and charged with the duties of protecting people and personal property from damage and depredation caused by wildlife. In the context of livestock, those responsibilities are shared with the Montana Department of Livestock. FWP defines a public safety problem related to carnivores as: any situation where an FWP employee reasonably determines that the continued presence poses a threat to human safety, an attack has resulted in the loss of livestock or personal pets, or that a human has been physically injured or killed.

As described in the preferred alternative, FWP intends to reduce the potential for wolf-human conflicts and minimize the risks of human injury due to any large-sized canid. While the risk of an aggressive encounter with a wild wolf is low, FWP believes that the risk goes up in the absence of proper management. Management experience elsewhere demonstrated that wolf habituation (loss of fear or food conditioning) might be a contributing factor to wolf-human interactions resulting in human injury. Whether or not habituation escalates to an immediate threat to human safety may hinge on a prompt management response by the management authority. FWP will utilize extensive outreach to inform the public, aggressively discourage habituation of wild wolves, and respond to conflicts.

Upon delisting from the state and federal lists, a person could kill a wolf if the wolf is "attacking, killing, or threatening to kill" a person or livestock when there is an immediate and direct threat (87-3-130, MCA). Dogs used to herd or guard livestock are discussed within the Livestock section. This statute also allows a person to kill a wolf if it is "attacking or killing a domestic dog" where dog in this passage refers to domestic pets or hunting dogs (bird dogs or lion hounds). The Montana Legislature would need to amend statue 87-3-130 in order for a person to kill a wolf if it is "threatening to kill" a pet or hunting dog.

Representative Comments:

W151: Wolves have become habituated to humans here because it is illegal even to haze them.

W152: Wolves in the Ninemile are habituating to gunshots and come to gut piles.

W153: Deer live in peoples' yards; wolves follow and then find llamas etc.

W326: Management plan needs to address public safety.

W518: I bet that with enough time and enough wolves they'll kill someone's grandkid; a Wolf in Alaska at a lumber camp dragged a kid off. The kid survived and they killed the radio collared wolf.

W697: People need to be able to harvest a wolf that has come into their yards and are endangering family, livestock and pets.

W897: There is inherent risk in anything we do.
W1198: I am concerned about all habituated animals.

W898: Dogs not livestock – I want to protect my dog from wolves legally.

W877: Wolves have attacked people in North America and killed them – on 1806, July 26 – Lewis and Clark Expedition

W696: They will come into people's yards. They need to be managed accordingly.

W1197: If wolves lose their fear of man, it will be a problem.

L0272: We have never seen a wolf so why do we need them? Grandfather told of wolf packs chasing teams and wagons with families running for their lives. If you want to see a wolf, put them in a locked-up zoo or park.

L0282: Last year and this year you incorrectly stated that outfitters are under the jurisdiction of the Dept. of Commerce. See pg. 2 of present report. Wolf history continues to be very bad on pg. 3. Pg. 6 wolves have never been extinct in Montana. Pg 13 History of wolves in Montana is highly inaccurate. Wolves were present in Glacier National Park many years prior to 1979 and 1986. See Singer 1975. Pg. 14 the number of wolf packs for the Great Bear, Rocky Mountain Front, Bob Marshall and Scapegoat Wilderness areas seems to be extremely low at only two or three. Most of the wolf history from USFWS dates from 1979 with only one from 1975. You should have more in the 1936 -1979 period, which you have basically ignored. Pg. 18 wolves were present before the 1980's in Glacier Park and the Rocky Mountain Front and South West Montana. On pg. 20 you do not mention the possibility of Alaska wolf genetics being present in the YNP area from the first plant of wolves. You do not mention the number of big game animals that will be taken in a year by a certain number of wolves. This is a very important issue in Montana and you have ignored it. Wolf-human encounters are inaccurately reported on pg. 56. Again you only briefly mention rabid wolves and they will probably occur in Montana again in the not too distant future. I cannot stress too strongly that many of the wolf attacks reported could have been human kills had not a suitable weapon been available to kill the wolf or wolves. On pg. 73 you say a regulated harvest of wolves will do many things. Have you looked at Alaska and Canada to see how hard it is to kill the necessary number of wolves to regulate a population? The 72-hr reporting requirement should be kept for wolves and perhaps extended for all species. You wonder why people quit buying hunting licenses. The above is just one more nail in the license coffin. I can remember when we had some common sense and freedom in this state. On pg. 87 you need to re-think the management of predatory species on winter big game ranges. Having invested much effort, money and time in our state wildlife management areas for ungulates we should not let them be ripped apart by too much predation or harassment. Also nowhere in this report have I seen the value of meat produced by wild animals for people in Montana. Having survived for several decades on wild game I see the value of the meat. For many Montana people hunting is more than recreation. Refer to page 124 on State Game Ranges. On page 123 the use of the term breeding pair appears to bias the number of wolves and wolf packs present. You should just try to count wolf packs and even then you will not be counting all the wolves or packs. Also lone wolves and pairs apparently aren't counted. On the top of page 125 common sense has again deserted you. If wolves have to be reduced to lessen ungulate mortality it does not necessarily follow that hunters should suffer also. It appears you want to create a wolf management bureaucracy. We know that we have plenty of bureaucrats in Montana today. They are even more numerous than wolves. Hire the best, experienced ungulate (deer and elk at least) and wolf person you can find to supervise the field program. You already have four or five bear specialist, train them to work with wolves in winter. They can work with wolves at other seasons also. Skip hiring the extra wardens.

E14: 1. I would like to see 15 breeding pairs or less and I would like to see them managed like black bears and mountain lions. 2. My biggest concern is my hound dogs. I know of several hound dogs that have been killed by wolfs in Montana and Idaho. Your own statistics show your third largest group of domestic kills are dogs. 108 cattle 220 sheep and 21 dogs. You are saying that it is ok for a rancher to protect his 400.00 calf and his guard dog but I can not protect my hound dogs. Which can be sold for thousands and are irreplaceable to me. I think anyone should be able to protect his dog know matter what kind.

E74: 1. Alternative 4. Less impact on other wildlife and danger to human welfare. 2. Change Alternative 5 to predator control if delisting does not occur.

Wildlife Management Areas

Summary of Comments: These comments address wolf presence on FWP Wildlife Management Areas (WMAs). Although few in number, most comments specifically question the appropriateness of wolf use of these lands because they were purchased using license money.

Response: FWP manages a network of WMAs across the state to benefit wildlife, particularly wintering ungulates in western Montana. Other WMAs provide upland habitat for waterfowl and upland game birds. In addition to providing wildlife habitat and open space, WMAs are also used by the public for outdoor recreation such as big game hunting, bird watching, wildlife viewing, fishing, camping, or bike riding. On some WMAs, FWP leases livestock grazing rights to private landowners in a coordinated, systematic program that accounts for the needs of wildlife, livestock, and vegetation.

Montana has had a wildlife habitat acquisition program since 1940, but the funding sources were not stable. As a result, the 1987 Montana Legislature established that a portion of hunting license dollars would be earmarked as a stable funding source for wildlife habitat protection. In 1995, the FWP Commission adopted a Statewide Habitat Plan. Although fee title acquisitions remained an option, greater emphasis was placed on use of conservation easements, management agreements, and leases. It is true that state license revenue and matching federal funds are used to secure these interests in wildlife habitat, as well as for maintenance of the properties. FWP also points out that there are also guidelines established by USFWS for how FWP spends matching federal funds. FWP does not want to jeopardize its ability to qualify for those funds.

FWP acquired some WMAs lands through fee-title purchase using a variety of funding sources. Examples include earmarked revenue from non-resident and resident license fees, surplus federal monies (Pittman-Robertson), proceeds

from auction of moose and bighorn sheep licenses, proceeds from the state waterfowl stamp, and mitigation funds from hydroelectric development projects. Other WMAs were acquired by FWP because private individuals donated them.

FWP acknowledges that under the preferred alternative that a wolf pack will be able to incorporate WMAs within its territory, consistent with the philosophy that mountain lions and black bears inhabit these lands, too. It would not be practical, nor feasible to zone wolves off WMAs. FWP also acknowledges that wolf use of WMAs during the winter period may result in displacement of wintering ungulates to neighboring private lands where they may cause other conflicts. Ongoing research has demonstrated that wolf presence or predation events can affect elk habitat use and distribution. FWP will work collaboratively to address this situation and resolve any conflicts, but will generally not remove individual wolves or wolf packs from WMA lands.

Representative Comments:

E72: 1. After reading your list of compiled comments the FW&P preferred management plan summary the complete list of Questions and Answers and considering my 50+ years of hunting fishing camping reading etc. I arrived at the following conclusions and attitudes about wolves in Montana: 1) The only way to successfully manage wolves is by direct control of their numbers. Our forefathers and settlers of Montana had it right the first time. They knew that people and agriculture came first and that any management plan that did not recognize these basic facts threatened their existence as viable families and communities. Thus they managed wolf problems with gunpowder and steel traps. Sadly many now think that we can set the clock back ignore what history has taught us about wolf behavior and make room for them as if the last 150 years of white man's presence in Montana is of little or no significance. 2) If I am forced to accept the wolf presence in Montana without the bought with blood right to vote on the issue which appears will be the case as our Federal wildlife managers have already done this then I would recommend the following: a) without adequate funding in our State FW & P (we are a poor state you know) leave all costs with the Federals as they started the problem. Let them finish it. To hand this tragic mistake off to the Montana taxpayers and our own respected wildlife managers is just another betrayal. Let them fight over funds for the wolf in Congress at least I have some impact there when I go to the polls to vote. b) if the vocal minority of wolf lovers tree huggers and other misguided animals before people groups want free ranging wolves in Montana then tell them to put their money where their mouths are and pay for the privilege. c) if funding is found (without stealing from our hunting and fishing license funds) to hire and sustain a State wolf management department then let them manage the wolf as a big game animal and a furbearer. This would bring in considerable revenue and would apply the most efficient form of wolf control known which is trapping. The wolf pelt makes a pretty good dust catcher on your floor or on your wall. 3) Most Montana citizens highly value the decades of effort and millions of dollars that sportsmen and others have put into building up our game populations and habitat. The very real threat of losing much of these populations to increasing numbers of free ranging wolves with big appetites and killer instincts is a travesty to say the least. 4) Our WMAs are extremely vulnerable to wolf predation. Without them as solid protection for sustaining our big game herds all people of Montana will lose out one way or another. 5) Without quick and deadly control of wolf numbers there will be an across-the-board loss of confidence in our State Big Game Management systems even though they had little or no part in promoting wolf reintroduction. This would likely start a downward spiral of big game hunter support and a marked decrease of sales of hunting licenses. 6) An earlier comment to FW&P said Manage people and not wolves. That is the root attitude (based on feeling and not common sense or experience) of persons who have put the interests of the wolf ahead of human welfare. In effect they desire to change the Face of Montana at the expense of our big game herds and those that support them year in & year out. So far they are winning! They have managed to dump an unwanted wolf problem into our back yards and now they want to force us to live with it under their choice of rules. The best interests of the Montana citizen or our game herds has nothing to do with their emotional drive and zeal to see this gut ripping ham stringing carnivore living a protected existence in Montana. It is no wonder that many are willing to utilize the Three S system of wolf management - Shoot Shovel and Shut Up. 2. I apologize for not following the instructions on this page and answering the questions. I could not find the five alternative Plans on your web site so could not address them. Please excuse my poor spelling. My Spell Checker does not work on this document. I realize that Montana would be better off if our FW&P had control of the wolf population and were left alone to manage them as big game animals. I doubt that this will happen because of all the adverse publicity and political pressures brought on by the emotional and misguided wolf lovers. Most of these pressure groups are from out of state and we seem to have lost our resolve in State politics to stand up to their foolish game management ideas and do what is best for our citizens and our game populations. For example our State level leadership was not strong enough to stand up to the same pressure groups that forced our FW&P to go belly up in regards the public hunting of Buffalo and Grizzly Bear. What a slap in the face to the Montana big game hunter and the FW&P! Will we continue to let these animal lovers push us around or will our leadership learn to stand its ground and speak the truth about wise game management? Thank you for the opportunity to make this comment. You have my permission to reprint it for comment purposes.

Information Education / Public Outreach

Summary of Comments: Some of these comments point out the need for FWP to develop information and education techniques and programs to keep Montanans informed about wolf conservation, wolf management, and human safety. Other comments also address the need for technical assistance for landowners and other rural residents. Still others emphasize that a more thorough representation of wolf ecology and how wolves interact with their environment was needed. Many comments note that the outreach efforts described in the preferred alternative were not sufficient.

Response: As described in the preferred alternative, FWP views public outreach as a basic tenet of the program that is very important in addressing the public's concerns about living, working, and recreating in the presence of a recovered wolf population. In the absence of an active public outreach effort, FWP cannot provide informational materials and technical assistance that will help increase social tolerance for wolves in Montana. FWP added more information to this

section of the preferred alternative description. The additional information was taken from the Wolf Advisory Council's Planning Document (Appendix 1 of the Draft EIS).

Representative Comments:

W 48: More education on wolf/people interaction.

W252: Need to show the wolf as the predator he is.

W468: True facts should be put out that wolves don't actually have to kill to cause death of cow/elk – they chase and stress them.

W597: Management plan should include whole public education program to meet goals in Alt#2. When you have to start control efforts, they will not be accepted by the public. Balance includes all uses of prey species, including predators. Will PR funding support animals that are not hunted? Concerns over economic impact to livestock producers.

W730: Would like to see the agency have an active outreach program to prevent wolf/man conflicts similar to our approach with bear management.

W751: A wolf visitor center could be used to help raise money and educate people about wolf conservation.

W1181: Information and education should be a strong part of any state plan.

W1222: The public needs to be informed (especially the public in the areas that may be impacted – ranchers, etc.) when wolves are relocated, introduced, or observed in a formerly unoccupied area.

W1469: More public education on wolf issues. This would solve a lot of the expenses written into this plan.

W2: 1. I don't know. 2. Wolves need to be a part of the ecosystem. Predators are a vital part of a healthy and diverse ecosystem. Maybe we need a People Management and Education Plan in place of a Wolf Management Plan.

W40: 1. #1 and #2. Wolves should be allowed to populate and expand their range. 2. More education from a native American point of view to be required if wolves are hunted/trapped. Wolves are a very powerful animal and they should not be killed without honor, education and a lot of reverence.

L0162: 1)Alternative #2 it seems to best address the concerns of those both for and against the wolves in the wild. I'm very much impressed with the thought, research and dedication that have been applied to all of the alternatives. 2) I would like to see specific penalties for those who would randomly destroy, wolves. Also, a plan for public education regarding wolves, would be wonderful. Ranchers need to know alternative ways to protect their stock (besides use of firearms). Outfitters and hikers need to know how to best protect themselves in the event of wolf/human confrontation and how best to avoid conflicts with wolves.

L0188: My selection of the 5 alternatives is Alt. #1. The removal of federal protection for the gray wolf is premature at this time. In Montana there is significant hostility and fear directed at this species. The local governments of Phillips and Fergus counties have stated that "wolves constitute a menace to society that cannot be tolerated. Dan Fuchs sponsored house bill 283. If this is an example of what the wolves will have to deal with in their struggle to survive it appears that FWP hasn't done the necessary public outreach to assure that when the wolves are delisted they aren't slaughtered and have to be re-listed again. FWP revenue is directly linked to sale of hunting licenses. Since wolf recovery depends on prey species, FWP would be pressured by hunting interest to aggressively manage the wolf population. I don't believe that the state of Montana would actually manage the wolf program at the high range. The livestock industry and hunting interests would never allow that. Since FWP would meet their legal requirements with the low end range, that's what could be expected. The state run wolf management program would undermine and reverse the gains that the wolves have made under federal protection. While I think that the state of Montana should be permitted to manage the gray wolf along with other wildlife species, the draft EIS suggest that they cannot be trusted with that responsibility at this time. Even FWP's preferred alt. 2 relies too mush on micro-managing wolves when prey populations drop. Therefore, this delisting process presents a conflict of interest for FWP. To have a more balanced approach to wolf management. FWP could implement revenue raising programs other than selling hunting license. I don't believe that public attitudes have changed that much regarding wolves. They have been brought back into an environment where most people don't know how to live with them. In order for people to accept wolves, their fear and hatred has to give way to more tolerance. Public outreach programs and services might bring that about. But once again, these changes need to occur before wolves are delisted and managed by FWP.

E17: 1. I believe they all address my concern because of the fact that before they were even proposed there was a lack of education on all of the alternatives. I believe that in order to have a strong wolf plan you need public backing and without the proper education on why wolves are important and why wolves deserve a home here in Montana is crucial to the simple integrity and simple stability of Montana's fragile ecosystem. We need education and that includes both young and old so that youngsters can grow up with all the facts in why wolves are important and adults do not base their opinions on basic myths and fallacies. 2. I would attempt to go to the drawing board the only one to me that seems like it will preserve the wolves is the no action alternative. As I said before more education of the public I believe will mean better ideas and a better wolf management plan for Montana.

Private Property

Summary of Comments: These comments address "private property rights", referring to wolf presence on private property, protection of livestock in the context of private property etc. Some comments assert a landowner's "right" to allow wolves on his or her property, while others assert a landowner's right to control or manage wolves on his or her property. Other comments assert a right to protect private property in the context of livestock.

Response: FWP recognizes that tolerance for wolves on private property is important to maintain the long-term security of a wolf population in Montana. While wildlife is a public resource and managed by FWP in trust for this and future generations, perpetuation of Montana's wildlife also depends on the habitats found on private lands. FWP is aware of its limited statutory authority over private lands and acknowledges that much is asked of private landowners when it comes to wildlife conservation in Montana. Without their willingness to sustain wildlife seasonally and year-round, Montana's wildlife habitats would be incomplete.

Landowner acceptance of wolf presence and the use of private lands by wolves are both highly variable in space and time. Given the mobility of the species and the extent to which public and private lands intermingle in Montana, it would not be unusual for a wolf to traverse from private to public lands many times in a single day. Private land may offer habitat features or concentrations of wintering ungulates that are especially attractive to wolves so the pack may utilize those lands disproportionately more than other parts of their territory. Certain land uses or management practices may increase the potential for wolf conflict with humans or livestock.

The preferred alternative described that upon delisting when state laws guide citizens and FWP activities, citizens will be able to protect their livestock if a wolf is "attacking, killing, or threatening to kill" livestock, as per MCA 87-3-130. Citizens will also be able to protect their domestic dog if the wolf is "attacking or killing" the dog. Citizens will need to report the incident to FWP within 72 hours. Private property owners retain the right to grant or deny access to their property by FWP, WS or other entities. Private property owners also retain the right to choose whether any wolf management activities or control actions take place on their property.

The underlying philosophy of the preferred alternative is that wolves will be allowed to find their place in Montana's landscape, yet be managed in an adaptive way that takes into account social tolerance, private property owner concerns, wolf numbers, and landownership patterns. Wolf packs in areas of interspersed public and private lands will be managed in ways similar to other free-ranging wildlife in Montana. FWP remains committed to assisting willing landowners and building collaborative relationships.

Representative Comments:

W281: US citizens have a right to protect our property – dogs, llamas, horses

W508: I disagree with public hunting for trophies, but agree that landowners should be able to protect their property.

W539: I prefer Alternative #4. As a private landowner and taxpayer, if a predator comes onto my property that is a danger to a toddler or a calf, I should have the right to kill it. I should have the same right to protect my property from a wolf just like a rattlesnake. Don't have time to call an authority. Need to act quickly. If the wolves are here to benefit the whole country, should pay for them. Don't necessarily trust the compensation program. Doesn't appear to work for our bull operation. State control but question funding.

W588: I'm not sure I approve of any plans. Because of cost to state and concerns about dens on private property. Dens on private property result in property being wolf habitat.

W1438: Prefer #4 – like the idea of protecting private property. I am concerned that wolf could get relisted under this option. Therefore would prefer #2.

L0068: 1) Alternative #4 because it is designed to allow the least number of wolf predators in the state. The wisdom of our great creator made provisions for predators to control wildlife until enough human beings populated the earth. At such tine human beings then would take over the management of wildlife. In some cases predators could and should become extinct! No problem! Such as the dinosaurs they became extinct when there usefulness was no more. 2) Wolf is and should be recognized as a predator any time they are found on private property. They should only be protected when they are in national parks and primitive areas. These alternatives are taking away "rights" of private property without any compensation. This is unconstitutional.

E9: 1. I have not read the alternatives yet I will. My choice to manage the wolf would be any alternative that considers the wolf a predator outside of Wilderness and Park areas (open hunting/trapping) and regulated hunting is allowed within these areas to manage population. 2. Hound hunters are having their dogs slaughtered by wolves. The barking of a trailing dog is attracting the wolves. Stories of hunters finding their dogs brutally ripped to

pieces are very common and on the increase. This is a regular event not an isolated few occurrences. Talk to the hunters especially in Idaho and Western Montana. I for one found more wolf tracks in Southwest Montana than I did lion tracks and not in the heart of the wolf recovery areas either. These things are everywhere. It is only fair that the hound hunter be able to protect his hounds from wolves by any means necessary. If it is proposed that a rancher can protect a $400 calf or his $300 ranch dog then it is only right that a hound hunter be able to protect his hounds. A working hound dog has a value of $1 000 to $5 000 or more. Typically hunters will run 2 to 5 dogs. Wolves that kill an entire hound pack which is happening can conceivably destroy up to $20 000-$25 000 worth of dogs. Where our right to protect our more valuable property? Nobody is reimbursing us. Hound hunters as myself should not only have the right to protect our property; we demand that right!