

Management Plan and Conservation Strategies for Sage Grouse in Montana

---Environmental Assessment--- Revised

Montana Environmental Policy Act



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CHAPTER 1: OVERVIEW AND SUMMARY

Proposed Action

Montana Fish, Wildlife & Parks (FWP) proposes to initiate new conservation strategies as defined in the *Management Plan and Conservation Strategies for Sage Grouse in Montana - Final Draft* (Final Draft Plan) and as pertains to FWP's statutory authority and responsibility, with oversight by the Montana Fish, Wildlife & Parks Commission. FWP would also continue or enhance some activities that currently address sage grouse conservation in Montana.

Purpose and Need for Proposed Action

The purpose of the Proposed Action is to help assure the long-term conservation of sustainable sage grouse populations in Montana while continuing to meet its statutory and regulatory requirements for management of Montana's fish and wildlife resources.

Sage grouse have experienced population declines and reduced distribution across their range in the western United States. Montana sportsmen, resource managers, landowners, and other conservation interests have been concerned about the status of sage grouse (*Centrocercus urophasianus*) and/or sagebrush (*Artemisia* spp.)-grasslands since the 1950s. Loss of sagebrush steppe across the western states -- primarily through conversion to cropland or treatments eliminating sagebrush -- approaches or even exceeds 50 percent in some areas (Dobler 1994, Knick 1999) and is considered to be a primary reason for long term declines in sage grouse abundance across their range (Schroeder et al. 2000, Connelly and Braun 1997). In recent decades, invasion by cheatgrass has changed the intensity of fire regimes in the Great Basin region and the resultant fires have contributed to additional losses of sagebrush habitats in those states (Knick and Rotenberry 1997, Billings 1994). Loss of sagebrush habitat in Montana, in terms of quality or quantity, may not have been as high as in other states although significant enough in parts of the state to influence sage grouse population trends (e.g., Swenson et al. 1987).

Growing concern about the status of sagebrush steppe, declines in sage grouse numbers, and long-term survival of sage grouse populations resurfaced in the 1990s. A Memorandum of Understanding (MOU) for the conservation and management of sage grouse was signed by member states of the Western Association of Fish and Wildlife Agencies (WAFWA) and federal natural resource management agencies in July 2000. The U.S. Forest Service (under the U.S. Department of Agriculture) and the Bureau of Land Management and Fish and Wildlife Service (both under the U.S. Department of Interior), agreed to work cooperatively with member states to develop conservation plans. Each state member of WAFWA agreed to convene a work group within 60 days of the effective date of the MOU. This led to the establishment in 2000 of the Montana Sage Grouse Work Group (see below) and subsequent development of the Management Plan and Conservation Strategies for Sage Grouse in Montana – Final Draft Plan.

Sage grouse have also received heightened awareness over the past 4 years due to a number of petitions submitted by individuals and organizations requesting the U.S. Fish and Wildlife Service (USFWS) to consider listing sage grouse as threatened or endangered under the federal

Endangered Species Act. In making this determination, the USFWS is *currently* evaluating the real or potential risks to sage grouse based on five factors (Section 4(a)(1) of the Endangered Species Act). Those factors are: 1) Habitat (i.e., "*present or threatened destruction, modification, or curtailment of its habitat or range*"); 2) Over-utilization (i.e., "*over-utilization for commercial, recreational, scientific, or educational purposes*"); 3) Disease or predation; 4) Existing regulation (i.e., "*inadequacy of existing regulatory mechanisms*"); and 5) Other factors (i.e., "*other natural or manmade factors affecting its continued existence*").

The Final Draft Plan was developed through a collaborative effort by the Montana Sage Grouse Work Group (MSGWG), comprised of a broad range of stakeholders in sage grouse management. Work group participants include representatives of FWP, other state agencies, federal agencies, tribes, conservation organizations, agricultural organizations, and private landowners. The Plan incorporated public comment at several stages in the process and a draft version was released for comment in December 2002.

The goal of the Final Draft Plan is to "Provide for the long-term conservation and enhancement of the sagebrush steppe/mixed-grass prairie complex within Montana in a manner that supports sage grouse, a healthy diversity and abundance of wildlife species, and human uses." The Final Draft Plan accomplishes this by providing biological information, identifying information gaps, facilitating data collection required for future resource management decisions, and establishing a process to achieve sage grouse management objectives through local management efforts. The Final Draft Plan includes management strategies for future conservation efforts. In providing for habitat protection, conservation, and restoration, the BLM, USFS, and USFWS will consider state conservation plans, such as the Final Draft Plan. If federal land managers consider any land use restrictions, Montana will have opportunities to provide additional input as required by National Environmental Policy Act (NEPA).

Reviewers may obtain a copy of the Final Draft Plan from the FWP State Headquarters in Helena, 1420 E. 6th Avenue or by downloading a file from the FWP website (<http://www.fwp.state.mt.us/>) or by calling the FWP Wildlife Division Office at 406-444-2612.

This Revised EA incorporates information and analysis from the Final Draft Plan and analyzes impacts of proposed actions by FWP, that are described in the Final Draft Plan.

Scope of Analysis

This Environmental Assessment (EA) analyzes potential impacts of sage grouse conservation activities considered for implementation by FWP and as described in 3 separate alternatives (Chapter 3). The Proposed Action Alternative represents proposed actions by FWP that are identified in the Final Draft Plan. Although the Final Draft Plan was developed through a collaborative effort involving state and federal agencies, non-governmental organizations, and individuals and general commitments are made by a number of federal agencies signatory to the Plan, the scope of this Revised EA, undertaken as a requirement of Montana Environmental Policy Act (MEPA), involves only FWP actions. As federal agencies consider implementing

related sage grouse conservation activities on agency-administered lands, these agencies will prepare separate analyses as per NEPA requirements.

Decisions to be Made

With approval by the FWP Commission, the Director will make a Record of Decision that will guide future sage grouse conservation activities by FWP. The decision may adopt one of the alternatives or a modification of one or more of the alternatives and will be based on the efficacy of the proposed actions to achieve sage grouse conservation goals; the environmental impacts described in this Revised EA; and the comments received through public review of the Final Draft Plan and this Revised EA.

Other Agencies Having Jurisdiction or Responsibility

Montana Fish, Wildlife & Parks is responsible for managing and conserving all wildlife species within the state. FWP has therefore been a leading partner in the development and facilitation of this planning process. Other resource agencies have also been involved with sage grouse planning including USDI Bureau of Land Management (BLM) and US Fish and Wildlife Service (USFWS), USDA Natural Resources Conservation Service (NRCS) and US Forest Service (USFS), and the Montana Department of Natural Resources and Conservation (DNRC).

Public Involvement Process

Development of the Final Draft Plan represents a collaborative effort involving a wide spectrum of stakeholders. Approximately 15 public meetings across the state, involving agencies, organizations, and individuals, were held to develop and review portions of the Draft Plan. The Draft Plan was released for full public review in December 2002. Seven additional public meetings were held around the state during the comment period to present the draft Plan and to receive public comments.

A total of 102 written and verbal public comments were received during the comment period. From those, 572 points were recorded and 136 representative points were included in the Plan Appendix with written responses. The Final Draft Plan was developed in response to public comments and through further changes suggested by the Montana Sage Grouse Work Group.

The Final Draft Plan and an earlier version of this EA were released for a 33-day public review period. Comments and FWP's responses to that public review are included in Appendix A. This Revised EA includes some changes in response to comments received and also has been modified to bring it into full compliance with MEPA requirements. All revisions are highlighted with a gray background. FWP will provide a 30-day public review period to allow for additional comments on this Revised EA. FWP and State Work Group Members will review public comments and will respectively incorporate their responses into a Final EA and Final Plan. The FWP Director will make a decision regarding new FWP actions identified in this Revised EA in the form of a Record of Decision (see preceding section: Decisions To Be Made). Final revisions will be made to the Plan in response to the Record of Decision and public comments. Upon approval from the FWP Commission, the "Final Plan" will then be signed by the Director, and will be routed to other contributing partners for signature.

Issues Identified Through Public Involvement

Public Comments on the Draft Plan appeared to fully represent the spectrum of perspectives on most aspects of sage grouse conservation in Montana. Appendix E of the Final Plan lists 136 representative points organized into 28 categories. Each of these also includes a written response. Many issues raised through public comment involve responsibilities that are outside of FWP's authority and therefore outside the scope of this EA. A summary of issues involving FWP, listed by category type, follows. For a more complete review of comments and issues see the Draft Final Plan, Appendix E.

- Distribution

Public comment addressed the quantity and quality of potential habitat (27 million acres) in Montana and the consequences of converting native range to cropland on current distribution of sage grouse. Other comment questioned the objective of 'no net loss' of sagebrush habitat, the relative extent of habitat conversion in Montana and elsewhere, and geographical distribution of subspecies of big sagebrush across Montana.

- Education

Public comment suggested a brochure be developed to attract more attention to sage grouse conservation issues.

- Endangered Species Act

Public comment requested more specific objectives should be included in the Draft Plan and suggested the PECE (Policy for Evaluation of Conservation Efforts When Making Listing Decisions) Criteria, used by the USFWS to evaluate species plans, were not fully met.

- Fire

Comments on prescribed and wild fire were primarily directed toward federal land management agencies. A comment referenced a Memorandum of Understanding between BLM and FWP requiring the agencies to meet 2-years prior to any sagebrush prescribed burning. Various Work Group members searched for such an MOU but with no success. Although FWP works closely with federal land management agencies on these issues and often provides comments to the agencies on plans for sagebrush manipulation, decisions related to fire management on federal land are outside FWP's authority.

- Funding

Public comment on funding FWP sage grouse conservation efforts was divided, with one point of view opposing the level of FWP program funding directed at conservation of sagebrush-grassland habitat and opposed to using hunting license revenue to cover the cost. The other viewpoint holds that sagebrush conservation should be funded regardless of the source.

- General Comments

Public comment questioned a need for protection of sage grouse under the federal Endangered Species Act (ESA) or expressed concern about impacts the Plan or ESA protection might have on private property. Others asked that the Plan consider economic impacts prior to adoption and implementation.

- Grazing

FWP provides funding for managed grazing systems through its habitat programs, and therefore, some grazing-related comment falls within the scope of this EA. Public comment was divided on the effects of grazing or grazing management on sagebrush, overall range condition, or sage grouse productivity. One viewpoint holds that sagebrush is an increaser and that reduced livestock grazing or improved grazing management would lead to a reduction in sagebrush and perhaps improved range condition. Other viewpoints either maintained that managing for sagebrush would reduce range condition or questioned any stated benefits to sage grouse through grazing or development of grazing systems. Some argued that the Plan should include more information on how grazing might benefit sage grouse.

- Habitat

Public comment suggested the FWP Upland Game Bird Habitat Enhancement Program be used to preserve sagebrush habitat. Additional comment suggested the Plan include a means for mitigating or restoring habitat that is lost. Comment questioned why Montana Department of Natural Resources and Conservation did not adopt “no net loss” of sagebrush habitat in the Plan. Comment also suggested monitoring sage grouse habitat amount and quality is just as or more important than monitoring sage grouse populations.

- Hunting

A number of comments were received regarding lengthening and shortening the hunting season, adjusting season start and end dates, and increasing or decreasing the bag limit. Some argued to close the hunting season on sage grouse, especially if they are truly imperiled, whereas others had the opposite belief that hunting should be maintained as hunters play a large role in sage grouse conservation. Some expressed concern that the Draft Plan did not consider hunting a real threat to sage grouse or why research would be used to determine a “maximum” harvest rate instead of a “sustainable” harvest rate. Additional comment expressed support for adaptive harvest management.

- Monitoring

Public comment suggested more emphasis be placed on multiple counts of leks during a given year. Other comment suggested writing more about the shortcomings of lek counts and the need for a statistically reliable means of estimating changes in abundance.

- Other Species

Comment expressed a concern that FWP's planning processes use a single-species rather than an ecosystem approach, whereas others contend that managing sagebrush-grasslands for sage grouse will benefit species that rely on these habitats. Additional comment focused on potential adverse impacts that big game populations may have on sage grouse habitat that would require herd reduction, or that the presence of antelope might provide a means of determining habitat suitability for sage grouse.

- Plan Process

Public comment questioned why the Draft Plan did not include a series of alternatives for analysis and decision-making. Comment questioned why the lack of hunter involvement in the Montana Sage Grouse Work Group and expressed the feeling that anti-hunting and anti-grazing interests were over-represented. Additional comment stated that an economic analysis and an EIS would be necessary for fulfilling MEPA requirements.

- Population

Public comments questioned the validity of sage grouse being endangered or threatened whereas others suggested the highest levels of conservation should be used to protect sage grouse. Comment questioned whether managing to maintain status quo would sufficiently curtail a decline in the sage grouse populations and others stressed that population fluctuations due to weather and predation need to be factored into population changes. Comment questioned why FWP's long-term lek monitoring data only included lek counts with 10 or more consecutive years of data. Other comments questioned why lek count data doesn't show a decline whereas the Draft Plan suggests sage grouse abundance has declined as a result of habitat loss.

- Predation

Public comment emphasized that predators have increased, both in terms of numbers and diversity, and their impact on sage grouse survival is significant. Some comments suggested more extensive predator control should be included in the Plan whereas others argued that FWP should discontinue spending \$110,000 each year for predator control, stressing predator control is no substitute for improving habitat. Some questioned why the Draft Plan simply considers predation "an expected component of natural mortality" or why predation may only be a concern when habitats are compromised.

- Research

Comments suggested most sage grouse research had been done out of state and may not be indicative of habitats in Montana. Comment requested a study to determine how imperiled sage grouse actually are. Additional comment suggested researching impacts of predation on sage grouse in both fragmented and intact habitats.

CHAPTER 2: AFFECTED ENVIRONMENT

The following is a general summary of information taken from the Final Draft Plan. For more detailed information please refer the Final Draft Plan.

Sage Grouse Status

Legal Classification

Sage grouse are managed under state authority including the statutory authority to regulate harvest. Legislative mandate designates sage grouse as an upland game bird (87-2-101, MCA). As an upland game bird, the hunting season remains closed unless opened by the Montana Fish, Wildlife & Parks Commission (87-3-402, MCA). FWP is mandated to conserve sage grouse in a manner that will keep the species from being listed as threatened or endangered under the federal Endangered Species Act as well as state listing (87-5-107, and 87-1-201, MCA). The Upland Game Bird Enhancement Program serves as a funding source "to preserve and enhance upland game bird populations in Montana" (87-1-246, MCA). Funding for the program comes from upland game bird hunting license sales and varies annually, depending on number of licenses sold. Moreover, FWP has the exclusive power to spend state funds collected for protection, preservation, and propagation of game birds (87-1-201, MCA).

Abundance and Distribution

Historical and current distribution of sage grouse in Montana is portrayed in Figure 1. Sage grouse occur across a major portion of central and eastern Montana as well as parts of southwestern Montana, roughly following current sagebrush distribution. FWP has inventoried approximately 800 active leks. These represent a minimum number of leks. Further inventory work is needed to document all leks in the state, to measure statewide abundance and distribution. Generally speaking, the extent of sage grouse habitat has declined over the past 100 years as a result of conversion of sagebrush habitat to domestic crops, hay land, and seeded pastureland, and through burning or spraying of rangeland sagebrush. Unlike many states, however, Montana still supports extensive sage grouse habitats estimated to be around 27 million acres of potentially occupied habitat, occurring in 39 counties.

Sage grouse abundance can fluctuate rather dramatically within a 10-year period primarily as a result of changing weather patterns but may also be affected by fluctuating predator and prey abundances (Figure 2). The recently arrived West Nile Virus may also affect sage grouse abundance. Hunting is another cause of direct mortality (See Recreational Values, below). Most or all of these causes of mortality have relatively short-term (<10 years) effects on population levels. Conversely, factors that contribute to the reduction of effective habitat, such as conversion or fragmentation, generally result in a long-term change in sage grouse abundance. This latter scenario has resulted in significant sage grouse declines or complete disappearance in parts of their range, including some parts of Montana.

ong-term sage grouse lek survey information in Montana suggests that for certain areas, populations have not declined in abundance even though annual numbers have fluctuated

significantly (Figure 2). This trend does not, however, apply to all areas. Likewise, although not reflected in Figure 2, some leks appear and disappear over time with changes in abundance of sage grouse, making annual data comparisons difficult. Similar to other game species, FWP surveys a sample of leks to monitor annual changes in sage grouse abundance, which provides sufficient information for managing sage grouse harvest, based on a minimum known population size (i.e., the surveyed population). Whereas current surveys provide accurate local information and are therefore effective for managing harvest of the surveyed populations (see Chapter 3, No Action Alternative), current lek monitoring is not sufficient to accurately portray statewide changes in sage grouse abundance, density, and distribution. FWP is proposing in this EA to develop a survey strategy that will produce this type of information over time.

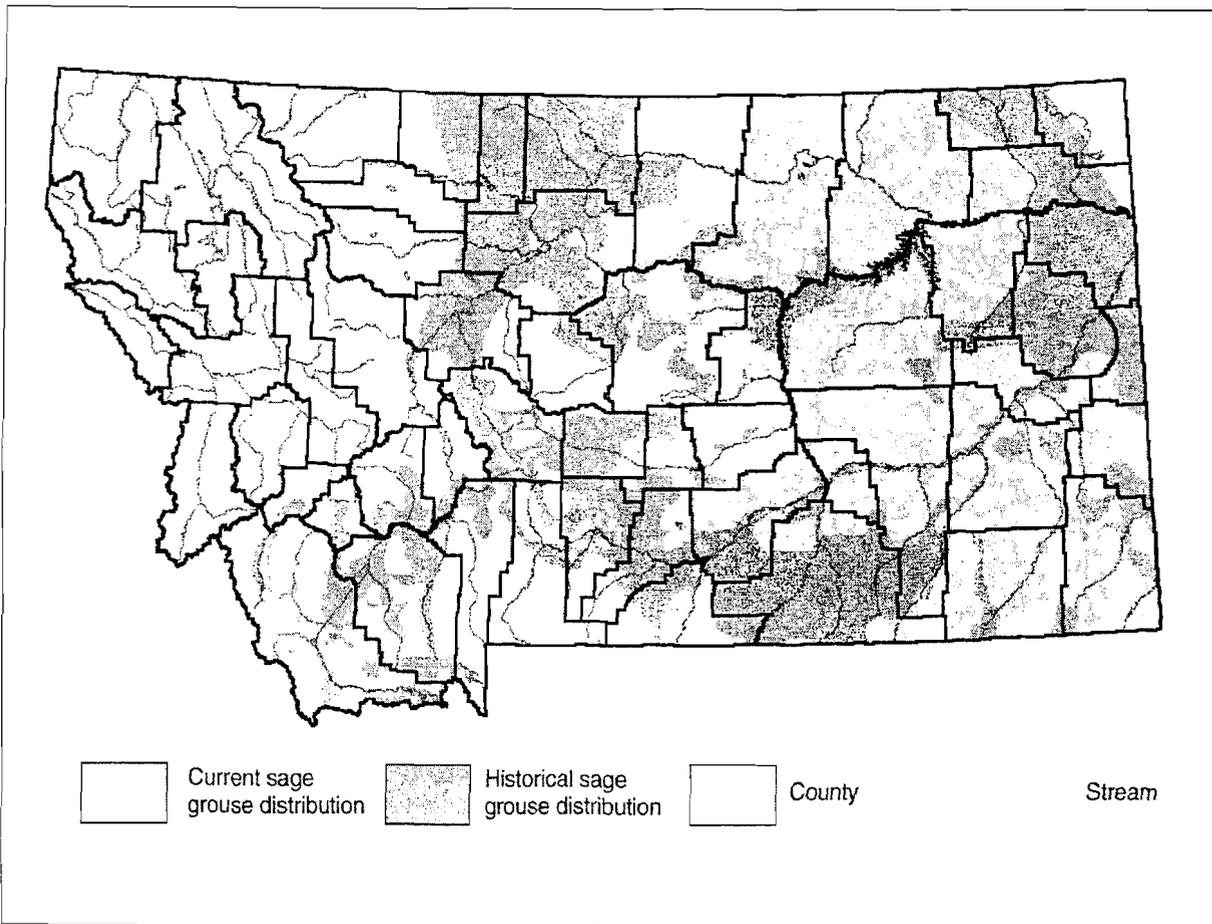


Figure 1. Current and historic distribution of sage grouse in Montana. Map provided by FWP Information Services.

Recreational Values

Hunting and viewing sage grouse are popular activities in Montana. During the spring breeding season, male sage grouse can be viewed strutting on leks or display grounds, a unique wildlife viewing opportunity. Sage grouse also have a long history in Montana as a popular game bird.

Although still popular, hunter survey data suggests sage grouse harvest and the number of hunter-days in pursuit of sage grouse have both declined significantly over the past 20 years. The statewide annual sage grouse harvest averaged 6,800 birds between 1997 and 2001, compared to a long-term average since 1958 of 29,700 harvested birds. This is due primarily to a 60% decline in hunting effort, as measured in hunter-days, but likely also includes a concurrent change in harvest rates over the same time period.

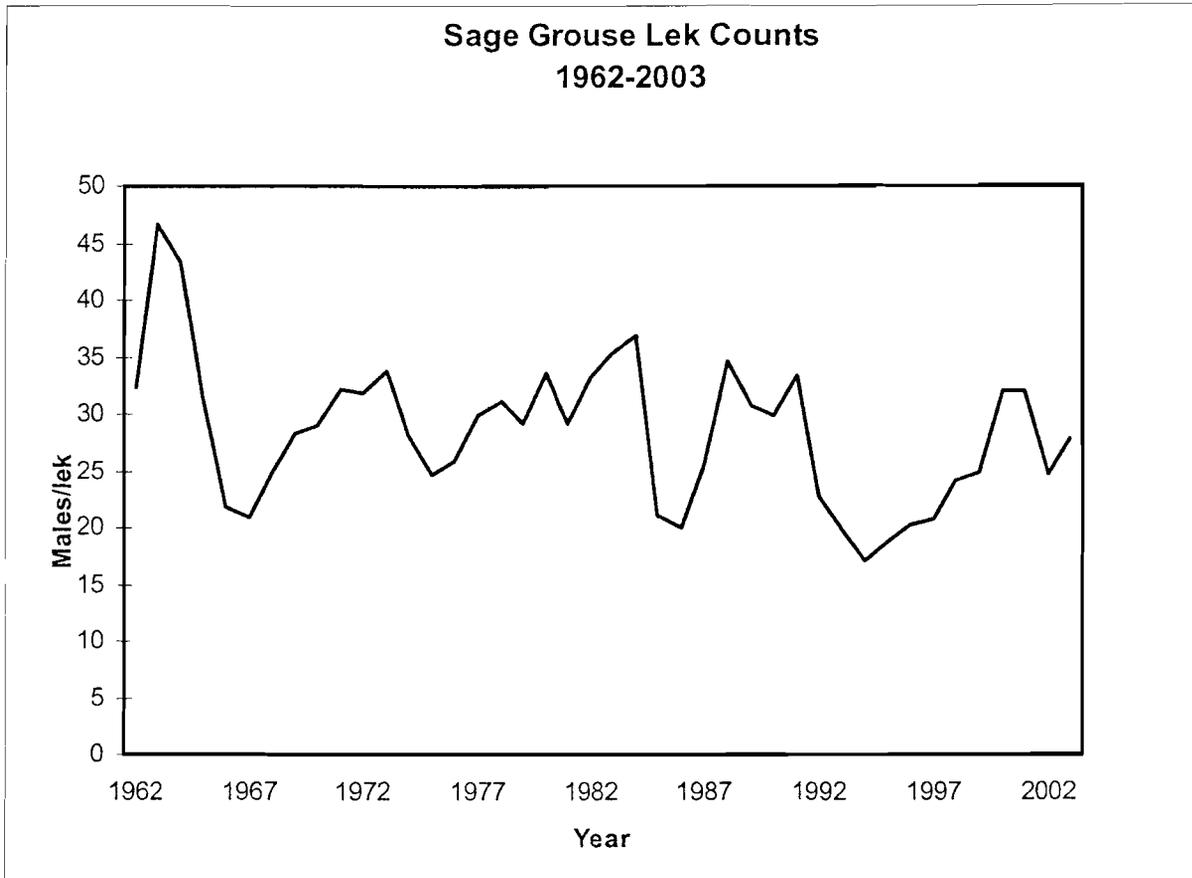


Figure 2. Long-term sage grouse lek survey results. Trend information is based on annual averages of leks with 10 or more years of consecutive survey data. Over time, new lek survey data sets (with 10+ years of data) have been added into these annual averages.

Sage Grouse Habitat

Habitat Ecology

Eleven species of grouse are native to North America, each with a specific habitat niche. Healthy sagebrush-grassland habitat defines the range of the sage grouse, a well-known sagebrush obligate. Because of its popularity and its shared niche with other sagebrush obligates, sage grouse are considered by many to be an “umbrella species” of sagebrush steppe

habitats (Rich and Altman 2001, Wambolt et al. 2002). That is, by conserving effective habitat for sage grouse, many additional species utilizing sagebrush habitats will also benefit.

Sage grouse are primarily herbivores, feeding on a mix of forbs and sagebrush during the growing season and then switching to sagebrush through fall and winter. Young birds feed primarily on forbs and insects during the first months after hatching. Sage grouse select for specific habitat characteristics that vary by season and lifestage. In general, sage grouse require large expanses of sagebrush-grassland habitat with a complement of native forbs and grasses. Habitat variations across the landscape, caused by a variety of factors such as soils, slope, and moisture regimes, provide a mix of vegetation types that sage grouse require for reproduction and survival. The specific habitat needs of sage grouse are described in Section IV of the Final Draft Plan and in Connelly et al. 2000, included in the Final Draft Plan, Appendix A.

Loss of sage grouse habitat through degradation or conversion to some other cover type can result in one or more necessary habitat components being reduced or lost, with consequential effects on sage grouse abundance and distribution (Swenson et al. 1987, Schroeder et al. 2000). Habitat fragmentation has further been shown to result in lower nest success rates for upland nesting waterfowl (Greenwood et al. 1995, Sovada et al. 1995, Reynolds et al. 2001, Ball et al. 1995) due to: 1) increased nest vulnerability to predation, and 2) a change in predator compositions to species more likely to encounter and depredate nests, such as red fox. It is likely that habitat fragmentation would have similar effects on other upland nesting birds including sage grouse.

Land Management and Economics

Economic resource development and land management of sage grouse habitats in Montana are closely intertwined. The sagebrush-grasslands that support sage grouse are managed predominantly as livestock range. The livestock industry is one of the primary sources of income in rural Montana. In some areas, oil and gas developments also occur. Coal bed methane development is being considered in parts of the sage grouse's range in southeast Montana. Over time, portions of historical sage grouse habitat have been converted from native range to cropland or hay land. Much of this occurred prior to any organized sage grouse monitoring efforts in Montana and it is therefore not possible to accurately determine what impacts this has had on sage grouse abundance on a statewide scale. In some other states, sagebrush habitat conversion has been significant enough to severely reduce the sage grouse's distribution to isolated remnant populations. Fortunately, Montana still retains extensive and relatively healthy sagebrush-grassland habitats. Traditional livestock grazing on private and public lands has played a significant role in maintaining these large prairie expanses. However, interest in converting and manipulating sage grouse habitats on private and government-administered lands still remains.

Physical/Biological Environment

Sage grouse occur on the sagebrush steppe habitats in southwest Montana and across portions of central and eastern Montana (Figure 1). Topography of sage grouse habitat ranges from flat expanses to rolling hills and mountain foothills. Rough breaks topography is unsuitable habitat

for sage grouse. Sagebrush is considered a climax component of sagebrush-grassland habitat types (Daubenmire 1970, Mueggler and Stewart 1980, Hansen et al. 1995). That is, sagebrush occurs in areas where soils and climate provide conditions for sagebrush to grow and reproduce as a stable vegetative community that will not be replaced by other types of vegetation (Peterson 1995). Wambolt and Frisina (2002) have described in detail the habitat characteristics of 16 woody sagebrush taxa occurring in Montana. Soils supporting individual taxa vary considerably from deep to shallow, clay to rocky, and fresh to alkaline or saline.

In eastern Montana, Wyoming big sagebrush (*Artemisia tridentata wyomingensis*) is the most common sagebrush occurring on upland sites with fine-textured soils. Plains silver sagebrush (*A. cana cana*) occurs on medium-textured soils along flood plains and replaces Wyoming big sagebrush as the upland species north of the Milk River along the Montana Hi-Line. Dominant understory species in eastern Montana include western wheatgrass (*A. Smithii*), prairie junegrass (*Koeleria cristata*), needle-and-thread (*Stipa comata*), green needlegrass (*S. viridula*), blue grama (*Bouteloua gracilis*) and a mix of forb species.

A mix of sagebrush species, typically dominated by mountain big sagebrush (*A. t. vaseyana*) occurs in southwestern Montana. Understory is dominated by Idaho fescue (*Festuca idahoensis*) and bluebunch wheatgrass (*Agropyron spicatum*) as well as a mix of forb species.

Precipitation ranges from 14 or more inches of moisture in southwestern Montana to 10 inches or less in eastern Montana.

In addition to sage grouse, the sagebrush-grasslands of Montana support 6 wildlife species considered to be sagebrush obligates and 46 species that are associated with sagebrush habitats (J. Carlson, Natural Heritage Program, unpublished data). Of these, FWP and the Montana Natural Heritage Program list 16 as species of concern including the sagebrush lizard (*Sceloporus graciosus*), pygmy rabbit (*Brachylagus idahoensis*), Ferruginous Hawk (*Buteo regalis*), burrowing owl (*Speotyto cunicularia*), blue-gray gnatcatcher (*Polioptila caerulea*), Preble's shrew (*Sorex preblei*), Dwarf shrew (*S. nanus*), Merriam's shrew (*S. merriami*), fringed myotis (*Myotis thysanodes*), spotted bat (*Euderma maculatum*), Townsend's big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), Great Basin pocket mouse (*Perognathus parvus*), Great Plains toad (*Bufo cognatus*), western hognose snake (*Heterodon nasicus*), and milk snake (*Lampropeltis triangulum*).

CHAPTER 3: ALTERNATIVES

The following is a description of 3 sage grouse management and conservation alternatives that FWP might implement. Unless otherwise depicted, ongoing FWP activities described in the No Action Alternative would also be continued in the Proposed and High-Level Protection Alternatives.

1. No Action Alternative

This alternative would maintain the current programs and activities FWP has undertaken for managing and conserving sage grouse in Montana. New actions described in the Final Draft Plan would not be adopted under this alternative. The following is a summary of FWP's current sage grouse management and conservation activities.

Over the past 15 years, FWP has conserved and enhanced sagebrush-grassland habitats with funding from two programs. Up to half of the Upland Game Bird Habitat Enhancement Program (UGBHEP) funding has been used for developing and implementing rest-rotation grazing systems with cooperating private landowners and agencies and, to a lesser extent, restoring habitats (i.e., reseeding sagebrush-grasslands) which serves to maintain, improve, and expand habitat for upland game birds, upland nesting birds, and other wildlife species. The Habitat Montana Program has purchased land conservation interests, primarily in the form of conservation easements but also including some fee purchases, on approximately 10,000 acres of sagebrush-grassland habitat annually. Under this alternative, sagebrush-grassland conservation would continue to be a priority within both programs, as described.

FWP is mandated to protect, preserve and propagate the fish and wildlife resources of the state (87-1-201, MCA). In addition, the agency is mandated to implement programs that manage wildlife, fish, game and nongame animals in a manner that prevents the need for listing as endangered under state law (87-5-107, MCA) or under the federal Endangered Species Act, that assists in the maintenance or recovery of those species, and that balances the maintenance or recovery of a species with the social and economic impacts of species maintenance or recovery (87-1-201, MCA). To that end, FWP will continue to provide technical assistance to both federal and state land management agencies relative to the specific habitat needs of sage grouse and will continue to work with public and private sector partners in the refinement of appropriate conservation actions. FWP will also continue to participate in and help fund local working groups whose mission is to provide community-based solutions for achieving sage grouse conservation.

FWP, with help from other agencies and individuals, has been identifying and monitoring sage grouse leks since the mid-1950s. In response to concerns raised nationally about sage grouse, FWP has recently increased efforts to inventory leks in previously unsurveyed but potentially occupied habitat. In some parts of Montana, lek inventory work (i.e., identifying and documenting leks) is a large task due in part to the vast geographic areas involved and the short timeframe within which surveys can be completed. Successful lek inventories can only take place within a 2 to 2.5-month period in the spring for approximately the first 3 hours of daylight

each day. FWP will continue inventorying leks, especially in areas where little inventory work has been completed.

In addition to leks, FWP has been actively identifying and mapping important sage grouse wintering areas. Winters with average to deep snow are considered necessary before observers can document with some certainty areas capable of supporting wintering sage grouse.

Past sage grouse lek surveys (i.e., counting male sage grouse on leks) have provided important information on how sage grouse abundance has changed over time relating to changing local conditions (Swenson et al. 1987, Eustace 2002) as well as an indication of breeding population levels during the survey year. However, current lek monitoring is not sufficient to accurately portray statewide changes in sage grouse abundance, density, and distribution. In addition to surveys of individual leks, 4 trend areas in central and eastern Montana are surveyed annually to quantify male lek attendance within a predefined area.

FWP is responsible for recommending annual harvest regulations to the Fish, Wildlife & Parks Commission, which holds statutory authority to open the season, set season length and bag limits. Under the No Action Alternative, FWP would continue to support the existing sage grouse hunting season structure, which has recently been based on FWP Commission guidance. Since 1996, the sage grouse hunting season has run from September 1–November 1. Daily bag limits have ranged from 2–4 birds with a possession limit of 2-4 times the daily bag limit. Bag limits have not been set based on any kind of pre-determined survey thresholds.

Deviation from this hunting season structure would be recommended if extreme cases dictated such as listing under the federal Endangered Species Act or if harvest exceeded 10% of the fall population. Under the current system, FWP recommends opening a season with proposed season length and bag limits. The department would recommend changes to the season given two scenarios. First, the season would remain closed if sage grouse became listed under the Endangered Species Act. Aside from listing, the current system does not have predetermined criteria for not opening a hunting season. Second, FWP would recommend a hunting season reduction if, based on lek monitoring and harvest surveys, it was determined that harvest exceeded the 10% fall population threshold, as described in the WAFWA Guidelines (Final Draft Plan, Appendix A). This second scenario is based on information “after-the-fact.” In contrast, the two action alternatives propose a new mechanism that would provide a means of adjusting or not opening the season, based on current-year lek survey data.

Post-hunting season hunter surveys have been used since the 1960s to track harvest levels of game species, including upland game birds. FWP will continue to conduct these annual harvest surveys.

FWP annually collects a sample of wings from harvested sage grouse for determining productivity, sex ratios in the harvest, and hatching dates of juvenile birds. This will continue as a targeted effort utilizing wing-collection barrels located near popular hunting areas and/or sending out wing envelopes to sage grouse hunters.

FWP has also partnered on a number of sage grouse research studies in the past and is currently contributing to 3 separate investigations. A study in north central Montana will provide information on sage grouse vital rates and habitat use on a landscape scale. A study in south central Montana will provide information on impacts of hunting on observed trends in a local sage grouse population. A study in southeastern Montana will identify and describe potential impacts of coal bed methane activities on sage grouse demographics. As funds become available and opportunities arise, FWP will continue to support research that serves to address management issues and advance sage grouse conservation.

2. Proposed Action Alternative

The Proposed Action Alternative includes a series of 3 actions that the Final Draft Plan proposes FWP implement. They encompass habitat conservation, harvest management, and monitoring. The intent of these actions is to improve FWP's management of sage grouse in compliance with 87-1-201, MCA, by implementing programs that prevent the need for listing under state or federal endangered species acts. These actions would directly serve to increase FWP's effectiveness in conserving sage grouse.

FWP proposes to continue spending approximately half of UGBHEP funding for sagebrush-grassland conservation purposes. Under this alternative, FWP would develop and implement the Montana Sagebrush Initiative. This program would use funds committed from UGBHEP and matching federal funds, totaling \$2.2 million, to purchase 30-year habitat protection agreements on approximately 183,000 acres of private land associated with sage grouse leks and wintering areas. Future funding could result in the purchase of more sagebrush habitat protection agreements. These voluntary, incentive-based agreements would protect sagebrush habitats from treatments designed to kill sagebrush such as herbicide spraying or prescribed burning, as well as protecting against conversion of sagebrush-grasslands to cropland. Should vegetation conditions warrant, or new information become available, these habitat protection agreements would allow for vegetation manipulation activities if they enhance sage grouse habitats and are agreeable between FWP and the cooperator. Priority areas for developing agreements are sagebrush-grasslands within 2 miles of leks as well as documented sage grouse wintering areas. These agreements would not affect grazing practices.

Past lek surveys have been used to monitor sage grouse abundance trends on a localized scale. These surveys do not provide an accurate measure as to statewide changes in sage grouse abundance. To address this need, FWP proposes to develop and implement a lek survey protocol that will provide a measure of long-term changes in statewide abundance, density, and distribution. This protocol would involve annually surveying a stratified sample of leks that may differ between years. Most or all documented leks in Montana would periodically be surveyed as a part of this new protocol.

The third new action described in the Final Draft Plan involves development of a refined sage grouse harvest regulation strategy. Under the Proposed Action, FWP would recommend an adaptive harvest management approach that would adjust prescribed sage grouse hunting regulations based on changes in male lek attendance. Specifically, during years of below-average lek counts, sage grouse daily bag limits would be 2 harvested birds per day with a 4-

bird possession limit; this is known as the “conservative regulation.” Alternatively, if lek counts during a particular year were above the long-term average, a “standard regulation” would be adopted that allows harvest of 4 sage grouse daily and an 8-bird possession limit. If adopted, the Fish Wildlife & Parks Commission would select from either the “standard” or “conservative” sage grouse hunting regulation package based on the current year’s lek survey results. A specific package would likely remain in place for a number of years (2-4) given observed growth rates in surveyed sage grouse populations.

This alternative also provides a means for determining if a hunting season should be opened. If a threatening decline became apparent in one or more ecotype segments (as defined in Final Draft Plan, Section IV, Page 43-44), FWP would recommend against opening a sage grouse season in the appropriate segment(s). Based on lek data showing projected high and known low population variation, a threatening decline is defined as 3 or more consecutive years with average lek survey levels at 45% or more below the long-term average, determined using leks with 10 or more years of consecutive data (as per methods used in Final Draft Plan, Section I, Page 9). Unlike the current approach (see No Action Alternative), this mechanism would provide the ability for FWP to recommend not opening a season based on current year’s lek-monitoring information.

3. High-Level Protection Alternative

The High-Level Protection Alternative would also improve FWP’s ability to manage sage grouse in a manner intended to keep sage grouse from being listed under state or federal endangered species lists, as mandated by 87-1-201, MCA. However, compared to the Proposed Action Alternative, this alternative would direct additional FWP resources toward sage grouse protection and habitat conservation.

Montana Fish, Wildlife & Parks would direct up to 75% of Upland Game Bird Habitat Enhancement Program funding toward supporting the Montana Sagebrush Initiative. This program would operate as described in the Proposed Action Alternative but would receive an additional 25% of UGBHEP funds. Funding levels in this program are affected by sales levels of upland game bird licenses, which can vary widely, depending on level of hunter participation. As with the Proposed Action Alternative, initial expenditures would purchase protection on approximately 183,000 acres. Expanded enrollment would require increased UGBHEP funding and an increase in matching federal funds. Under this alternative, additional work-force resources would be redirected to enable achievement of this level of habitat conservation. As with the Proposed Action Alternative, these agreements would not affect grazing practices.

Sagebrush-grassland conservation would be the highest priority for the Habitat Montana Program. Currently, Habitat Montana focuses conservation on three habitats across the state of Montana. This increased emphasis on sagebrush-grassland habitats would result in a corresponding reduction in conservation priority for intermountain grassland and riparian ecosystems.

Under the High-Level Protection Alternative, FWP would recommend to the Fish, Wildlife & Parks Commission that hunting regulations be restricted to 1 sage grouse per day with a 2-day

possession limit. FWP would further recommend that the hunting season be reduced to a 31-day season starting October 1. FWP would further recommend that the spring falconer season not include sage grouse, as spring harvests directly reduce the spring breeding population.

This alternative also provides a means for determining if a hunting season should be opened. If a threatening decline became apparent in one or more ecotype segments (as defined in Final Draft Plan, Section IV, Page 43-44), FWP would recommend against opening a sage grouse season in the appropriate segment(s). Based on lek data showing projected high and known low population variation, a threatening decline is defined as 3 or more consecutive years with average lek survey levels at 45% or more below the long-term average, determined using leks with 10 or more years of consecutive data (as per methods used in Final Draft Plan, Section I, Page 9). Unlike the current approach (see No Action Alternative), this mechanism would provide the ability for FWP to recommend not opening a season based on current year's lek-monitoring information.

FWP contributes approximately \$110,000 annually to the Department of Livestock for the purpose of helping control coyotes in areas of Montana where deer and/or antelope numbers are below management objectives. Under this alternative, FWP would redirect up to half of this funding toward control of nest predators in areas where sage grouse lek surveys averaged 45% or more below the long-term average for 3 or more consecutive years (as described above for not opening the hunting season). Instead of aerial gunning coyotes, this redirected funding would be targeted at controlling skunk, raccoon, and red fox, as these species are more likely to prey on sage grouse eggs.

Lek inventory and surveys, development of a statewide lek monitoring protocol, wing collection of harvested birds and post-hunt harvest surveys would be the same as described in the Proposed Action Alternative.

CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

This chapter describes the environmental, economic, and cultural consequences of potential new actions by FWP as described in the Proposed Action Alternative and the High-level Protection Alternative, Chapter 3. The No Action Alternative, representing current FWP sage grouse management and conservation efforts, provides a basis for comparison. Potential impacts are analyzed in terms of both the Physical/Biological Environment and the Human Environment.

A. PHYSICAL/BIOLOGICAL ENVIRONMENT

1. LAND RESOURCES – Soil, Water, Air, and Vegetation

This section considers impacts to soils and geology, water quality and quantity, vegetation and air. None of the actions described in this environmental assessment will have an appreciable effect on air. New proposed habitat conservation efforts by FWP can impact other land resources to varying degrees.

No Action Alternative

Under the No Action Alternative, FWP would not take any new actions identified in the Proposed Action. FWP would not negotiate protection under the Montana Sagebrush Initiative for 183,000 acres of sagebrush-grassland on private land. As a result, this acreage would remain unprotected and could be converted to cropland or could be subject to rangeland manipulations such as herbicide applications and prescribed burning to reduce or eliminate sagebrush. Potential secondary impacts associated with no action may include loss of native vegetation in some areas and resultant increases in soil erosion as well as negative effects on water quality. Cumulative effects associated with No Action include the possibility for additional habitat losses outside of what might have been protected under one of the action alternatives, resulting in additional losses of native habitat. The USDA administers a number of agriculture conservation programs in Montana that can help conserve and enhance sage grouse habitats. Sage grouse are acknowledged as a priority species for some USDA programs in Montana and NRCS uses a General Specifications and Planning/Implementation Guide that provides some standards for how USDA programs operate in sage grouse habitats. None of the USDA programs, however, are specifically geared toward sagebrush grasslands or sage grouse conservation. Other agencies have not adopted plans or guidelines for managing sage grouse habitats and there are no current plans, that we are aware of, for either manipulating or protecting native vegetation. We, therefore, know that there are no secondary or cumulative impacts from other actions currently under consideration. However, FWP does not know to what degree cumulative impacts might occur from any future actions not yet in consideration.

Based on significance criteria, we do not find any significant effects on soil, water, air, or vegetation from the no action alternative. While the No Action Alternative may result in a loss of native vegetation, soil erosion, and impacts on water quality, these impacts are beyond the control of FWP because they would result from a landowner taking actions on private property, other government agencies taking action on government-administered land, or result from

another agency not taking actions to prevent the loss of native vegetation. The nature of the impacts that would result from FWP maintaining the status quo or continuing to work toward maintaining a viable population of sage grouse but without taking more proactive measures are discreet and fall below the level of significance because they are not severe in nature, duration or geographic extent. The probability that further impacts on native vegetation will occur depends on actions taken by other entities that these other entities do not yet contemplate and therefore are not in the planning process. The quality and quantity of the resource impacted will depend more on actions taken by other entities and where and to what extent these entities take certain actions. The No Action Alternative does not have growth inducing or growth inhibiting aspects on vegetation, soil, or water quality, nor does it set a precedent committing FWP to future actions. Moreover, the No Action Alternative does not conflict with laws, requirements, or formal plans. However, based on its analysis, FWP feels it could more proactively comply with its statutory mandates to conserve sage grouse by implementing the Proposed Action Alternative than the No Action Alternative.

Proposed Action Alternative

Under the Proposed Action Alternative, approximately half of UGBHEP funds would be used to purchase habitat protection agreements for conserving sagebrush-grassland habitats from sagebrush control measures and conversion to cropland (i.e., the Montana Sagebrush Initiative). Initially, with the addition of federal funds, approximately 183,000 acres of privately owned sagebrush-grasslands would be enrolled into habitat protection agreements. The agreements would ensure that native vegetation remained on enrolled properties for a period of 30 years. Although some of these enrolled areas might be affected by wildfire, they would be subject to legal protection from prescribed fire, herbicide treatments, and conversion to cropland. Should vegetation conditions warrant, or new information become available, these habitat protection agreements would allow for vegetation manipulation activities if they enhance sage grouse habitats and are agreeable between FWP and the cooperator.

The secondary effects of this alternative include maintaining a protective vegetative layer on soils and thereby maintaining current rates of soil erosion and water quality levels. We are unaware of any negative cumulative effect that other actions may have in association with this alternative. Other agencies may develop sage grouse conservation measures in the future that would likely work in concert with the Proposed Action Alternative, rather than resulting in cumulative negative effects. We are not aware of future actions of the same type under concurrent consideration by any agency through any impact studies or permit processing procedure. The USDA administers a number of agriculture conservation programs in Montana that can help conserve and enhance sage grouse habitats. Sage grouse are acknowledged as a priority species for some USDA programs in Montana and NRCS uses a General Specifications and Planning/Implementation Guide that provides some standards for how USDA programs operate in sage grouse habitats. None of the USDA programs, however, are specifically geared toward sagebrush grasslands or sage grouse conservation. Other agencies have not adopted plans or guidelines for managing sage grouse habitats and there are no current plans, that we are aware of, for either manipulating or protecting native vegetation. We, therefore, know that there are no secondary or cumulative impacts from other actions currently

under consideration. However, FWP does not know to what degree cumulative impacts might occur from any future actions not yet in consideration.

Based on a review of significance criteria, this alternative poses only minor positive impacts and poses no negative impacts on soil, water, air, or vegetation. The Proposed Action Alternative proposes that FWP take more proactive steps to comply with its statutory mandate to conserve sage grouse. While these are important steps in moving forward with on-the-ground actions to conserve sage grouse, they do not in themselves represent a significant impact on vegetation, soil, air or water quality. The positive impacts of the Proposed Action Alternative are not severe, are local and are of 30-year duration. They do not set a precedent, do not conflict with laws, regulations, or plans, and do not have growth inducing or inhibiting aspects on soil, vegetation, air quality, or water quality. The impacts may occur on resources of varying quality and quantity, largely depending on other parties' actions. Sagebrush habitat and its dependent species are important to the state, which is a reason FWP proposes this action.

High-Level Protection Alternative

This alternative represents the highest level of habitat program funding that FWP would direct toward sagebrush-grassland conservation. Up to 75% of UGBHEP would be dedicated to purchasing sagebrush habitat protection agreements on private lands through the Montana Sagebrush Initiative. Initially, with the addition of federal funds, this alternative would result in enrollment of approximately 183,000 acres into sagebrush habitat protection agreements. Federal and UGBHEP funds would continue to maximize the number of acres enrolled into habitat protection agreements within the 75% UGBHEP funding allocation. Sagebrush-grasslands would also be the highest priority for purchasing conservation easements through the Habitat Montana Program. This alternative would result in the highest acreage of sagebrush-grasslands enrolled in habitat protection agreements and conservation easements with resultant benefits to native vegetation, soils, and water quality. The secondary effects of this alternative include maintaining a protective vegetative layer on soils and thereby maintaining current rates of soil erosion and water quality levels. As with the Proposed Action Alternative, we are unaware of any negative cumulative effect that other actions may have in association with this alternative. Other agencies may develop sage grouse conservation measures in the future that would likely work in concert with the Proposed Action Alternative, rather than resulting in cumulative negative effects.

We are not aware of future actions of the same type under concurrent consideration by any agency through any impact studies or permit processing procedure. The USDA administers a number of agriculture conservation programs in Montana that can help conserve and enhance sage grouse habitats. Sage grouse are acknowledged as a priority species for some USDA programs in Montana and NRCS uses a General Specifications and Planning/Implementation Guide that provides some standards for how USDA programs operate in sage grouse habitats. None of the USDA programs, however, are specifically geared toward sagebrush grasslands or sage grouse conservation. Other agencies have not adopted plans or guidelines for managing sage grouse habitats and there are no current plans, that we are aware of, for either manipulating or protecting native vegetation. We, therefore, know that there are no secondary or cumulative impacts from other actions currently under consideration. However, FWP does

not know to what degree cumulative impacts might occur from any future actions not yet in consideration.

Based on a review of significance criteria, this alternative does not result in any significant impacts to soils, water, air and vegetation because of the discreet nature of the proposed actions. Implementing the High Level Protection Alternative would hopefully play an important role in conserving sage grouse, but by itself would not pose any impacts on soil, water, air, or vegetation that would rise to the level of significance.

2. FISH and WILDLIFE

New FWP actions intended to conserve sage grouse and their habitats are the focus of this environmental assessment. This section analyzes how each of the proposed actions could affect wildlife. FWP does not expect any actions described in this environmental analysis to adversely impact fish or aquatic habitats.

No Action Alternative

Under this alternative, FWP would not implement any of the new actions described in Chapter 3. In terms of FWP's habitat conservation programs, sagebrush-grasslands would continue to be a priority for funding conservation practices (e.g., grazing systems and conservation easements). However, the Montana Sagebrush Initiative would not be implemented. A substantial amount of privately-owned sagebrush-grassland habitat occurring around sage grouse leks and wintering areas would remain unprotected from sagebrush control measures and conversion to cropland.

A statewide lek survey protocol would not be developed under this proposal. As in the past, FWP would continue to conduct lek surveys but would not sample leks in a way that could provide accurate statewide trends in sage grouse abundance or distribution. As a result, sage grouse numbers may vary widely on a broad scale or cease to exist in some parts of Montana without detection.

The No Action Alternative would retain the current season structure and package of sage grouse hunting regulations. Results of lek surveys would not trigger a pre-determined change in season structure or harvest regulations for sage grouse. This alternative could result in additional sage grouse being harvested during years when sage grouse abundance is below the long-term average, although its effect on sage grouse populations remains unclear. Whereas hunting is a direct cause of sage grouse mortality, current information, including annual lek surveys and research on the effects of season structure and bag limits on annual harvest, suggests that Montana's current harvest regulations probably have not contributed to long-term declines in sage grouse abundance or distribution. Sage grouse harvest, however, has declined considerably since the early 1960s. Such a decline appears in large part due to a decline in hunter effort by approximately 60% since 1975, when this statistic was first estimated. Based on its professional judgment, FWP concurs with the WAFWA guidelines (Final Draft Plan, Appendix A) recommending 10% or less of the fall sage grouse population should be harvested during a given year. Based on lek counts, production estimates from harvested birds (i.e., wing

surveys), and hunter harvest surveys, sage grouse harvest rates have generally remained well below 10% of Montana's surveyed sage grouse population. Currently, if FWP determined that harvest exceeded the 10% guideline, the department would recommend a reduced hunting season in that ecotype segment (as defined in Final Draft Plan, Section IV). This approach uses harvest levels that are after-the-fact (i.e., based on post-hunting season data) and is not responsive to current-year's lek surveys. Any impacts of harvest on sage grouse populations could be additive when populations fall below long-term averages— despite corresponding declines in harvest. Although FWP has adjusted sage grouse bag and possession limits many times since the mid 1970s, these adjustments were not based on a predetermined protocol. This alternative would retain the existing system, which does respond to population fluctuations but does not do so in an explicit and predetermined manner. Unlike the two action alternatives, the current mechanism for not opening the sage grouse hunting season is based on if the sage grouse were to become listed.

Under the no action alternative, other sagebrush obligate species would continue to receive the level of habitat protection offered by existing programs.

Secondary impacts may include reduced abundance and distribution of sage grouse and other sagebrush obligate species, resulting from habitat losses by prescribed fire, herbicide spraying, and conversion to cropland in areas that would otherwise be protected under one of the action alternatives. By not developing a monitoring protocol, FWP would lack a level of sensitivity to changes in sage grouse abundance and distribution, which secondarily could result in less responsive management, and further reduced sage grouse abundance and/or distribution. Managing sage grouse harvest under the current scheme is not directly responsive to annual changes in sage grouse abundance and, under the No Action Alternative may result in somewhat higher harvests during periods of lower sage grouse abundance. This secondarily may lead to lower sage grouse numbers during some years if the effects of harvest are additive in nature.

The No Action Alternative reduces FWP's ability to fully respond to the sage grouse's conservation needs. FWP is not aware of future actions regarding sage grouse under concurrent consideration by any agency through any impact studies or permit processing procedure. Other agencies have not adopted plans or guidelines for managing sage grouse habitats and there are no current plans, that we are aware of, for either manipulating or protecting sage grouse habitats. We, therefore, know that there are no secondary or cumulative impacts from other actions currently under consideration. However, FWP does not know to what degree cumulative impacts might occur from any future actions not yet in consideration. If other agencies are also limited in their approach to sage grouse conservation, the cumulative effect could lead to an increased likelihood that sage grouse populations would decline and potentially would be listed as threatened or endangered under the federal Endangered Species Act.

The status quo (No Action Alternative) would continue to provide some level of conservation for sage grouse. Therefore, based on the significance criteria, this alternative does not pose any significant impacts on fish and wildlife because it represents a discreet action of maintaining present efforts to ensure a healthy population of sage grouse in Montana. While the No Action Alternative does not include more proactive steps, it does not by itself impact fish and wildlife in

a significant fashion. Maintaining the status quo by FWP would not, in itself, precipitate a listing under the Endangered Species Act. However, by not taking proactive steps, it would also not appreciably aid in preventing a listing.

Proposed Action Alternative

Under this alternative, FWP proposes to utilize up to half of UGBHEP funds in combination with matching federal funds to purchase sagebrush-grassland habitat protection agreements on private lands through the Montana Sagebrush Initiative. These agreements would focus on areas within 2 miles of leks and documented wintering areas. Sage grouse require sagebrush for survival nearly yearlong, especially outside of the growing season. Sagebrush provides food and cover from weather and predators. Proposed habitat protection agreements would provide an incentive-based means of assuring that important sage grouse habitats are protected from rangeland treatment such as prescribed fire, herbicide spraying, and conversion of native range to cropland. Initially, with matching federal funds, Montana Sagebrush Initiative would result in 30 years of protection for approximately 183,000 acres of key habitat. As these initial funds are spent, additional funding may be used to continue purchasing sagebrush protection. In addition to sage grouse, many other wildlife species would also benefit from maintaining these native habitats including up to 6 species that require sagebrush and 46 species that are associated with sagebrush-grasslands.

Lek surveys (i.e., counting breeding males on leks) have been used to estimate breeding population levels during a given year and, if surveyed for a number of years, can provide a measure of long-term abundance trends on a local scale. Currently, FWP does not have an accurate statewide measure of how sage grouse distribution and abundance may have changed over time. Although lek survey efforts have increased in recent years, they do not provide a reliable estimate of changes in density and overall distribution on a statewide scale. This alternative would result in development and implementation of a survey strategy, involving a variety of agency and private sector partners, which annually samples a subset of leks to detect changes in both annual abundance and the long-term trend in distribution and density of sage grouse. FWP and other cooperators have been actively inventorying leks in areas that have not been surveyed in the past, in an attempt to identify most or all leks in Montana. Lek inventories would be used as a foundation for implementing this statewide survey protocol.

Under this alternative, FWP would develop and propose to the Fish, Wildlife & Parks Commission a sage grouse harvest management strategy (known in the Final Draft Plan as Adaptive Harvest Management) that would be more sensitive to and respond to changes in sage grouse abundance by adjusting hunting regulations. That is, as sage grouse populations fluctuate across predetermined thresholds, hunting regulations would prescriptively adjust to a more liberal or conservative regulation package. **A primary effect of this Proposed Action Alternative includes a higher likelihood of maintaining and enhancing a viable population of sage grouse.**

Secondary effects of the Proposed Action Alternative to wildlife include a higher likelihood that sagebrush obligate and associated species would maintain viable populations. Improved data

from the proposed monitoring protocol and an adaptive harvest strategy would likely improve FWP's management response time to changes in sage grouse abundance and/or distribution.

We are not aware of future actions under concurrent consideration by any agency through any impact studies or permit processing procedure. Other agencies have not adopted plans or guidelines for managing sage grouse habitats. We, therefore, know that there are no secondary or cumulative impacts from other actions currently under consideration. However, FWP does not know to what degree cumulative impacts might occur from any future actions not yet in consideration. If other agencies, organizations, and individuals actively pursue effective sage grouse conservation measures in concert with this alternative, sage grouse, and likely other sagebrush associated species, such as pygmy rabbits, would have a greater likelihood for sustaining populations into the distant future and there would also be a lower likelihood of listings under the federal Endangered Species Act.

Upon review of significance criteria, we do not find any impacts associated with this alternative to be significant because of the higher probability of maintaining and enhancing a viable population of sage grouse in Montana. Again, FWP's Proposed Action alternative represents a discreet action of taking proactive steps to conserve habitat, manage harvest of sage grouse, and monitor sage grouse. These steps do not rise to the level of significance because of their limited nature. Currently, Montana has a viable population of these species and the Proposed Action Alternative involves proactive steps to maintain these populations. As such, the impacts of the Proposed Action Alternative on fish and wildlife does not reach the level of significance because while the action's purpose is to maintain a game species that is important to the state, the impact is not severe in duration, frequency or geographic extent, is not growth inducing or inhibiting, does not set a precedent, and does not conflict with laws, requirements, or formal plans. However, in concert with federal agencies and local groups taking proactive steps, these actions could help prevent a decline in sage grouse distribution and abundance.

High-Level Protection Alternative

This alternative represents the highest level of habitat program funding that FWP would direct toward sagebrush-grassland conservation. Up to 75% of UGBHEP would be dedicated to purchasing habitat protection agreements on private land. In addition, the Habitat Montana Program would be heavily prioritized toward sagebrush-grassland conservation. Sage grouse and other sagebrush obligate and associate wildlife species would benefit from the high priority sagebrush-grasslands would receive under this alternative. This redirection of statewide program funding would reduce conservation efforts in other important wildlife habitats including riparian areas, intermountain grasslands, and upland game bird habitats outside of sagebrush-grasslands. As a result, wildlife species associated with these other priority habitats would not receive the level of conservation from FWP that has occurred in the past. Current high priority issues such as protection of big game winter range from subdivision development, riparian and wetland conservation, and funding for other upland game bird habitat enhancements would carry a lower funding priority under this alternative.

This alternative would reduce the hunting season length and bag limit and would move the opening of hunting season to October 1. Sage grouse tend to move out of moist areas by

October 1, shifting to upland sagebrush habitats. Areas of occurrence become less predictable and, correspondingly, they are more difficult to hunt. Adult hens may become less vulnerable as broods disperse and separate. Sage grouse also tend not to “hold” as tightly as fall progresses (i.e., they act more “wild”), resulting in reduced sage grouse harvest. FWP would expect reduced bag limits and a later opening to also reduce hunter participation (See Aesthetics/Recreation in this Chapter). Although the current sage grouse season structure has not been shown to cause long-term negative impacts to sage grouse, this alternative would substantially reduce hunter harvest.

As with the Proposed Action Alternative, FWP would develop and implement a lek survey sampling protocol that would monitor changes in statewide sage grouse abundance and distribution. This effort would assure detection of long-term changes in sage grouse numbers, and provide more explicit information than has been available in the past.

The focus of predator control, as funded by FWP through the Department of Agriculture, would change under this alternative. Currently all funding (approx. \$110,000) is used annually for aerial-gunning coyotes in areas where deer and antelope populations are below management objectives. Under this alternative, based on criteria described in Chapter 3, High-Level Protection Alternative, FWP would redirect half of the existing funding toward control of mammalian nest predators including skunk, raccoon, and red fox. Remaining funds would continue to be directed toward coyote control. In waterfowl and pheasant studies where predator control efforts have shown positive results, the benefits were very localized and temporary in nature (Chesness et al. 1968, Duebbert and Kantrud 1974; Sargeant et al. 1995). Given the vast habitats that sage grouse utilize, the overall benefit of predator control on increased sage grouse nest success would be limited.

Impacts associated with the High-Level Protection Alternative include a higher likelihood that sage grouse and sagebrush-associated species would maintain viable populations in Montana because of increased habitat conservation and protection measures. Reduced harvest due to a restrictive hunting season and predator control would result in somewhat higher survival and production, at least at a localized scale. Nest predator populations would be reduced within a localized control area.

We are not aware of future actions under concurrent consideration by any agency through any impact studies or permit processing procedure. Other agencies have not adopted plans or guidelines for managing sage grouse habitats. We, therefore, know that there are no secondary or cumulative impacts from other actions currently under consideration. However, FWP does not know to what degree cumulative impacts might occur from any future actions not yet in consideration. If other agencies, organizations, and individuals actively pursue effective sage grouse conservation measures in concert with this alternative, sage grouse, and likely other sagebrush associated species, such as pygmy rabbits, would have a greater likelihood for sustaining populations into the distant future and there would also be a lower likelihood of listings under the federal Endangered Species Act.

Upon review of significance criteria, we do not find the effects of this alternative to be significant because while it may enhance the probability that sage grouse and other sagebrush obligate

species are not listed, it represents a discreet action that must be taken in concert with other private and governmental actions to have a significant impact on a listing decision by the USFWS. Only in concert with efforts not yet formulated or developed by other groups could this alternative combine to make a more long-lasting impact.

B. HUMAN ENVIRONMENT

1. NOISE/ELECTRICAL EFFECTS

New FWP actions identified in this environmental assessment would not result in any noise or electrical effects in the human environment. Likewise, neither would there be any secondary, cumulative, nor significant noise or electrical impacts.

2. LAND USE

This section considers impacts to lands and their uses, including productivity or profitability, lands with special designations, or impacts on residences. New state actions analyzed in the environmental assessment would have little or no effect on land uses except for the voluntary-based Montana Sagebrush Initiative.

No Action Alternative

This alternative would not result in any new actions. Land that might have been enrolled into the Sagebrush Initiative under one of the action alternatives would not be enrolled under this alternative. Current FWP sage grouse conservation activities would continue.

Secondary effects from No Action would result in fewer funds than in the Proposed Action Alternative being directed toward private landowners intended as incentives for sage grouse conservation. We are not aware of future actions under concurrent consideration by any agency through any impact studies or permit processing procedure. The USDA administers a number of agriculture conservation programs in Montana that can help conserve and enhance sage grouse habitats. Sage grouse are acknowledged as a priority species for some USDA programs in Montana and NRCS uses a General Specifications and Planning/Implementation Guide that provides some standards for how USDA programs operate in sage grouse habitats. None of the USDA programs, however, are specifically geared toward sagebrush grasslands or sage grouse conservation. Other agencies have not adopted plans or guidelines for managing sage grouse habitats. We, therefore, know that there are no secondary or cumulative impacts from other actions currently under consideration. However, FWP does not know to what degree cumulative impacts might occur from any future actions not yet in consideration. If other agencies also respond in a limited manner to sage grouse conservation needs, it is more likely that sage grouse populations could decline and potentially could be listed under the federal Endangered Species Act. If listing of sage grouse were to occur, many land use practices would be affected including farming, grazing, subsurface resource extraction, and any other activity that might affect sage grouse survival and productivity.

Upon review of the significance criteria, this alternative would not have a significant effect on land use because the only impact of the No Action Alternative on land use is not providing more money for incentives as proposed in the Proposed Action Alternative. The No Action Alternative does not impact the status quo of land use. While a listing of sage grouse under the federal Endangered Species Act may impact land use, the No Action Alternative acting alone does not appreciably influence the USFWS listing decision.

Proposed Action Alternative

This alternative would result in development of the Montana Sagebrush Initiative Program with up to 50% of UGBHEP funds and matching federal funds being directed toward the purchase of sagebrush habitat protection agreements. Initial funding would purchase habitat protection agreements on approximately 183,000 acres, involving a one-time payment of \$12/acre. After this initial accomplishment, FWP would continue to fund Montana Sagebrush Initiative with UGBHEP and leveraged federal funds. These incentive-based voluntary agreements would affect private land use by restricting sagebrush control measures and conversion of native sagebrush habitats to cropland. These agreements would likely result in maintaining properties as rangeland and would not restrict grazing management. Should vegetation conditions warrant, or new information become available, these habitat protection agreements would allow for vegetation manipulation activities if they enhance sage grouse habitats and are agreeable between FWP and the cooperator.

In addition to the primary effects, the Montana Sagebrush Initiative would provide an incentive to ranchers to maintain traditional livestock ranching on affected properties. We do not anticipate any other secondary effects on land use as a result of protecting native vegetation from conversion or manipulation.

The Montana Sagebrush Initiative, when fully implemented, will provide a 30-year term lease agreement for protecting approximately 183,000 acres of native vegetation. FWP also administers the Habitat Montana Program, which is wider in scope (including riparian, intermountain foothills, and shrublands) and is intended for purchasing easements and, to a lesser extent, fee title holdings. By comparison, habitat projects funded through Habitat Montana are more comprehensive in stipulating development rights, setting up grazing systems, and other stipulations that can vary by setting. The Natural Resources Conservation Service (NRCS) also administers the Grassland Reserve Program, which has been a relatively small program (because of funding limitations) in Montana but can purchase short-term leases as well as longer-term (30 year and perpetual) leases and easements. Perpetual easements under this program have ranked highest for funding. Because of funding limitations and a wide range of habitats that qualify, the cumulative effect of all of these programs is relatively small. The Montana Sagebrush Initiative is unique in that it involves a term lease agreement that is focused entirely on sagebrush habitats and is capable of enrollment of more acreage per unit cost because of the term commitment accompanied by narrowly-focused stipulations. Outside of NRCS programs, FWP is not aware of future actions under concurrent consideration by any agency through any impact studies or permit processing procedure. Other agencies have not adopted plans or guidelines for managing sage grouse habitats. We, therefore, know that there are no secondary or cumulative impacts from other actions currently under consideration.

However, FWP does not know to what degree cumulative impacts might occur from any future actions not yet in consideration.

Enrollment in the Sagebrush Initiative would be based on a voluntary sign-up by interested landowners. Upon review of the significance criteria, no significant impacts on land use are associated with this alternative. Therefore, the impacts of the Proposed Action Alternative on land use are voluntary agreements by which landowners, for compensation, agree to restrict certain manipulations of native vegetation to protect habitat. These agreements along with lek surveys and adaptive harvest management are examples of proactive on-the-ground steps to maintain a viable population of sage grouse. However, on their own, they do not rise to the level of significance because they are less than severe in nature, duration, geographic extent, and frequency. The probability that the agreements will be consummated is high, but the probability that sage grouse would be listed is unknown. The agreements may inhibit some growth regarding land use and induce some as well. The agreements will target certain lands within a two mile radius of leks and documented wintering areas, and thus will focus on quality vegetation, which is important to maintaining sagebrush obligate species. This Proposed Action Alternative will not set a precedent and complies with all state and federal laws, requirements, or plans.

High-Level Protection Alternative

Like the Proposed Action Alternative, this alternative would result in development and implementation of the Montana Sagebrush Initiative. However, instead of using up to 50% of UGBHEP funds for these purposes, this alternative would commit up to 75% of UGBHEP funds for purchasing sagebrush habitat protection agreements. Although initial projections of 183,000 acres of habitat protected is the same, the additional UGBHEP would ultimately result in more acres of land enrolled into the program.

Primary, secondary, and cumulative effects would essentially be the same as the Proposed Action Alternative. In this alternative there would be less funding available for existing habitat programs if that funding were used specifically for sage grouse. However, this alternative does not pose any potentially significant impacts for the same reasons stated in the Proposed Action Alternative.

3. RISK/HEALTH HAZARDS

New FWP actions identified in this environmental assessment would not result in any kind of hazard or health risks. Likewise, neither would there be any secondary, cumulative, nor significant impacts influencing or causing risks or health hazards.

4. COMMUNITY IMPACT

This section considers potential impacts to human distribution or population growth, social structure, employment opportunities, transportation, industrial or commercial activities or personal income. New FWP actions described in this environmental assessment may affect personal income through the expenditure of UGBHEP and matching federal funds on habitat

protection agreements. However, FWP does not anticipate that any proposed actions will impact human distribution, population growth, social structure, employment opportunities, transportation, or industrial or commercial activities.

No Action Alternative

No habitat protection agreements would be purchased under this alternative and therefore no net change in personal incomes would result. Under this alternative, federal Landowner Incentive Program Funds (approximately \$1.3 million), which have been awarded to Montana Fish, Wildlife & Parks and were designated for use as landowner incentive payments in the Sagebrush Initiative program, would be returned to the USFWS.

In terms of secondary impacts, Montana, and more specifically its landowners, would lose the opportunity for utilizing an incentive-based program for conserving sage grouse habitats.

We are not aware of future actions under concurrent consideration by any agency through any impact studies or permit processing procedure. Other agencies have not adopted plans or guidelines for managing sage grouse habitats. We, therefore, know that there are no secondary or cumulative impacts from other actions currently under consideration. If other agencies also fail to respond to sage grouse conservation needs it is more likely that sage grouse could decline and potentially would be listed under the federal Endangered Species Act, which would affect land uses and communities across the Greater Sage Grouse's range.

Upon review of significance criteria, there are no significant impacts to communities as a result of this alternative. The No Action Alternative doesn't pose community impacts and therefore there are also no significant impacts as a result of this No Action Alternative.

Proposed Action Alternative

This alternative dedicates approximately half of UGBHEP funds toward the purchase of sagebrush habitat protection agreements. These funds, in turn, would be used to leverage an equal amount of federal funding for implementing the Montana Sagebrush Initiative. This voluntary incentive-based approach to sagebrush conservation would initially result in expenditures of approximately \$2.2 million over the next 2 years. As these funds are spent, additional funding would be pursued to continue this program. Owners of key sage grouse habitats across the state who are willing to commit to 30 years of sagebrush protection would be recipients of these funds.

Enrollment of sagebrush habitats in the 30-year protection agreements would preclude conversion of these rangeland properties to cropland, potentially having greater economic return. However, lands supporting critical use by sage grouse (leks, nesting, and winter range) are generally remote from population centers and services, and characterized by seasonally harsh weather, low precipitation and marginal soils. Most such sites have not been farmed or otherwise developed because they are unsuitable for sustained crop management. Thus the initial \$12/acre payment for the conservation agreement, when complemented by the land's continuing use for grazing, should constitute a positive economic benefit to landowners.

Moreover, properties subject to the sagebrush protection agreements may be sold or transferred, so program participants will still be able to effectively manage their operations and assets.

Secondary impacts associated with this alternative from additional income to private landowners would result in a small economic benefit to local economies. We are not aware of future actions under concurrent consideration by any agency through any impact studies or permit processing procedure. Other agencies have not adopted plans or guidelines for managing sage grouse habitats. If other agencies, organizations, and individuals also develop effective approaches to conserving sage grouse, the cumulative effect could be more stable or increased sage grouse populations and a reduced likelihood of sage grouse listing under the federal Endangered Species Act. Avoiding listing, through improved conservation, would avoid potentially negative economic impacts to individuals and local economies, which could be in the form of land use restrictions.

Upon review of significance criteria, there are no significant impacts to communities as a result of this alternative. The Proposed Action Alternative poses a positive economic impact to the communities, and to the conservation of sage brush habitats, but that impact does not rise to the level of significance.

High-Level Protection Alternative

In comparison to the Proposed Action Alternative, this alternative would dedicate approximately 25% more UGBHEP funds toward sagebrush habitat protection agreements. The sum of these UGBHEP funds would be used to leverage federal funds for financing the Montana Sagebrush Initiative. Initial funding of approximately \$2.2 million to be spent over the next two years would remain the same as in the Proposed Action Alternative. However, when new funds become available, a higher proportion of UGBHEP would be directed toward this program compared to the Proposed Action Alternative.

Similar to the Proposed Action Alternative but at a slightly higher level, secondary impacts associated with this alternative from additional income to private landowners would result in a small economic benefit to local economies. We are not aware of future actions under concurrent consideration by any agency through any impact studies or permit processing procedure. Other agencies have not adopted plans or guidelines for managing sage grouse habitats. If other agencies, organizations, and individuals also develop effective approaches to conserving sage grouse, the cumulative effect could be more stable or increased sage grouse abundance and a reduced likelihood of sage grouse listing under the federal Endangered Species Act. Avoiding listing, through improved conservation, would avoid potentially negative economic impacts to individuals and local economies.

Upon review of significance criteria, there are no significant impacts to communities as a result of this alternative.

5. PUBLIC SERVICES/TAXES/UTILITIES

New FWP actions identified in this environmental assessment would not result in any changes or impacts to public services, taxes, or utilities. Likewise, neither would there be any secondary, cumulative, nor significant impacts to public services, taxes, or utilities.

6. AESTHETICS/RECREATION

This section considers impacts on scenic areas, vistas, designated wilderness areas, and on recreation and tourism. FWP actions described in this environmental assessment would not have an appreciable effect on aesthetic resources. Recreation, in the form of hunting, could be affected by the proposed alternatives. Whereas the FWP Commission sets sage grouse hunting regulations, FWP may propose changes to sage grouse hunting regulations based on this analysis and public response.

No Action Alternative

This alternative would continue the current sage grouse season structure and harvest regulations. Therefore, changes to recreational hunting would only occur under extreme conditions. As described in Chapter 3, No Action Alternative, the current mechanism for FWP to recommend not opening a sage grouse hunting season would be if the sage grouse became listed under the federal Endangered Species Act. If harvest exceeded 10% of the fall population additional restrictions would be recommended. Although, based on current lek surveys, we have no indication that this season structure has had a negative impact on sage grouse abundance; it does not provide a clearly defined harvest strategy. This may give the impression to the public and other agencies that harvest is not being closely managed in response to changes in sage grouse abundance. A secondary effect, in addition to potentially lower sage grouse abundance, may be a loss of trust in FWP and concern over the genuine interest FWP has in sage grouse conservation.

We are not aware of future actions under concurrent consideration by any agency through any impact studies or permit processing procedure. Other agencies have not adopted plans or guidelines for managing sage grouse habitats. As with other issues related to sage grouse, if FWP continues to manage as status quo, and other agencies follow a similar pattern, the cumulative effect of only limited conservation-responses will likely increase the odds that sage grouse will be listed under the Endangered Species Act.

While this action may impact recreational opportunities, it still directs FWP to continue present efforts to maintain a sustainable population of sage grouse. It allows FWP to respond regarding harvest management, but not as quickly as the Proposed Action Alternative. Therefore, based on the significance criteria, this No Action Alternative will not have a significant impact on aesthetics or recreation because it allows for recreation in its present form.

Proposed Action Alternative

Under this alternative, FWP would develop an adaptive harvest management strategy that would result in preset adjustments to sage grouse bag limits, as a “triggered” response to fluctuations in sage grouse populations determined from annual monitoring of leks, with approval by the Montana Fish, Wildlife & Parks Commission. Implementation of this alternative could reduce recreational opportunity when populations dip below a pre-determined threshold but also could increase opportunity when surveyed sage grouse populations rise above long-term averages.

Although past lek attendance data suggests otherwise (Final Draft Plan, Appendix C, Page 3), there is a possibility that sage grouse hunting regulations could change on an annual basis as a result of this alternative. Annual changes would add complexity to regulations. If a hunting season remained closed in one or more ecotype segments, this would add additional complexity.

We are not aware of future actions under concurrent consideration by any agency through any impact studies or permit processing procedure. Other agencies have not adopted plans or guidelines for managing sage grouse habitats.

The Proposed Action Alternative will not significantly affect aesthetics or recreation, because it allows FWP to react according to certain criteria. This will help ensure that FWP and the Commission can initiate changes before they affect overall distribution and abundance of sage grouse.

High-Level Protection Alternative

Under this alternative FWP would propose a more restrictive season structure and harvest regulation (than either the No Action or Proposed Action Alternatives) to the Montana Fish, Wildlife & Parks Commission. The season opener would be moved from September 1 to October 1 and season length would be 31 days and the spring falconer season for sage grouse eliminated. The daily bag limit would be reduced from the current 3 birds to 1 bird and the possession limit would remain twice the daily bag limit. The combination of reduced bag limits, later season opener, and shorter season would substantially reduce hunter/falconer opportunity and participation. The season would, however, continue to be opened, providing opportunity for sage grouse hunting enthusiasts.

In the past, hunters have lent considerable support to FWP when working on projects intended to conserve sage grouse, such as grazing systems and conservation easements. Reduced hunter opportunity without regard to population levels under this alternative may secondarily result in less interest by hunters to support sage grouse conservation measures. If other agencies also respond with highly restrictive or protective approaches to managing sage grouse habitat (e.g., onerous access restrictions), a cumulative result may be a loss of community support for sage grouse conservation efforts. We are not aware, however, of future actions under concurrent consideration by any agency through any impact studies or permit processing procedure. Other agencies have not adopted plans or guidelines for managing sage grouse habitats.

Upon review of significance criteria, no impacts associated with this alternative on recreation are considered significant.

7. CULTURAL/HISTORICAL RESOURCES

New potential actions by FWP identified in this environmental assessment would not result in any impacts to cultural or historical resources. Likewise, neither would there be any secondary, cumulative, nor significant impacts on cultural or historical resources.

CONCLUSION

Private Property Regulatory Restrictions

Actions described in this environmental analysis do not regulate the use of private, tangible personal property, or real property under a regulatory statute adopted pursuant to the police power of the state; the proposed action does not involve the denial of an application for a permit or other permission; and the proposed action does not restrict the use of a regulated person's private property. The proposed Sagebrush Initiative would be available to landowners using a voluntary, compensation-based enrollment. None of the actions described herein, including the purchase of habitat protection agreements from willing landowners place regulatory restrictions on private property, therefore the proposed action does not require an evaluation of regulatory restrictions on private property (75-1-201, MCA).

Evaluation of Mitigation, Stipulations, and Other Controls

There are no mitigation, stipulations or other controls associated with the proposed actions. Therefore, no evaluation is necessary. Mitigation requirements and stipulations are more often appropriate for permitting procedures. The nature of the proposed action is to allow FWP to take actions that further conserve sage grouse and would help prevent the need for listing. Therefore, it does not involve permitting or granting of a license on which stipulations would be placed.

Finding for Need of Environmental Impact Statement

In Chapter 4, Environmental Consequences, FWP analyzed the impacts of 3 alternatives. For each impact, FWP considered the significance criteria, as set out in 12.2.421, ARM, including a) the severity, duration, geographic extent, and frequency of impact; b) the probability that the impact will occur or reasonable assurance that the impact will not occur; c) growth-inducing or growth-inhibiting aspects of the impact, including the relationship of the impact or contribution to the cumulative impacts; d) the importance to the state and to society of each environmental resource or value affected; e) any precedent that would be set as a result of an impact of the proposed action that would commit the department to future actions; and f) potential conflicts with local, state, or federal laws, requirements, or formal plans.

Through these reviews, FWP determined that none of the effects associated with these alternatives would have a significant impact on the physical environment or human population in the area. An EA is therefore the appropriate level of analysis for the proposed action and an Environmental Impact Statement will not be required. Specifically, there are not significant impacts of the proposed action because Montana currently supports a healthy population of sage grouse and each alternative is intended to maintain that. The degree to which the alternatives try to maintain and enhance that population vary, but all fit within the larger picture of what the United States Fish and Wildlife Service might or might not do, what other federal agencies such as the BLM, FS, and NRCS are able to do and last but not least, what individual landowners choose to do on their own property.

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PREPARER AND PUBLIC COMMENT INFORMATION

Preparer: Rick Northrup, Wildlife Biologist, Montana Fish, Wildlife & Parks
Email: rnorthrup@state.mt.us
Phone: 406-654-1341

Please send comments to the following address or email address no later than **July 16, 2004**:

Montana Fish, Wildlife & Parks
c/o Sage Grouse Comments
P.O. Box 200701
Helena, MT 59620-0701

fwpwld@state.mt.us

Additional information, or a copy of the EA or Final Draft Plan, may be obtained via the Internet at www.fwp.state.mt.us or by calling FWP at 406-444-2612.

APPENDIX A

PUBLIC COMMENTS ON FIRST DRAFT EA

The Management Plan and Conservation Strategies for Sage Grouse in Montana - Final Draft Plan (FDP) was developed as a collaborative effort by the Montana Sage Grouse Work Group over a 3.5-year period, starting in 2000. Work group participants included representatives of FWP, other state agencies, federal agencies, tribes, conservation organizations, agricultural organizations, and private landowners. Public comments were incorporated into the planning process at several stages and a draft plan was released for comment in December 2002. In response to comments received, the Work Group developed the Final Draft Plan.

An Environmental Assessment was completed by FWP to analyze potential impacts of proposed FWP actions described in the FDP, known as the Proposed Action Alternative. A No Action Alternative and the High-Level Protection Alternative were also analyzed in the EA. The EA and FDP were released for public review on March 25, 2004. The 33-day public review period ended May 14, 2004. During the public review period, FWP mailed out approximately 400 copies of the EA and FDP and copies were also distributed at local working group meetings in Dillon, Miles City, and Glasgow. In addition, both documents were available for download from FWP's website. A total of 10 public comments were received for both the EA and Final Draft Plan. From these comments, 37 individual points were identified and have been organized into 14 issue-types, which are listed below with a response (in italics) from FWP. In some cases a double slash (//) is used to separate individual comments.

1. Agencies

The NRCS and BLM probably have the most significant influence over sage grouse habitat on private and public land, respectively, but lack commitment in the Final Draft Plan. NRCS has not committed to a "no net loss" of sagebrush habitat goal, which should be a standard for federal agencies (Appendix E, p. 14-15 FDP), and BLM hasn't really committed to anything at all (Section II, p. 23-24 FDP). BLM should adopt a statement of commitment similar to the Forest Service (Section II, p. 21-22 FDP) and all agencies clarify support for a "no net loss" or degrading of sage brush habitats as a minimum standard for all future and ongoing management prescriptions involving agency money, time or materials.

This comment is directed at agencies other than FWP. The identified agencies will have an opportunity to respond to this comment in the Final Plan.

The Final Draft Plan fails to outline adequate regulatory mechanisms and/or policies that will be implemented and effective in reversing the significant loss of sage grouse habitat and ensure long-term sage grouse conservation in Montana.

FWP does not have regulatory authority for habitats outside of properties that they hold an interest, such as conservation easements, wildlife management areas, or cooperative habitat agreements (FDP, Section II). For these properties, land uses are managed to minimize impacts or preferably benefit wildlife habitat, such as through prescribed grazing systems. Land

managing agencies that have partnered in developing the FDP will have an opportunity to respond to this comment in the Final Plan.

2. Endangered Species Act

I suggest outlining a final conservation strategy that, at a minimum, meets the Policy for Evaluation of Conservation Efforts (PECE).

Section IX of the FDP describes how the Plan addresses both the PECE criteria and the five factors the USFWS uses for evaluating if the sage grouse should be listed under the Endangered Species Act. As described in Appendix E, Page 7-8, the Plan was developed by a mix of partners who are committed to the sage grouse's long-term viability in Montana. In addition to individual commitments by the various agencies (FDP, Section II), the Plan necessarily maintains a level of generality that allows for flexibility as sage grouse management needs are identified within specific geographic areas. Section VI describes issues facing sage grouse and a diverse mix of actions that can be taken to address specific needs. We believe the assurances called for in PECE will, in large part, be met through the committed partnership that has developed and will continue through local working groups. As described in the FDP, Section VIII, Page 98, identifying specific sage grouse needs and implementing appropriate actions will be a cooperative effort between agencies, individuals, and local working groups.

Sage grouse are not endangered but in need.

We agree that Montana's sage grouse and their habitats are generally in good shape. The Final Draft Plan describes 12 issues that affect sage grouse by varying degrees, changing over time and location (FDP, Section VI). Management objectives described in Section I of the FDP are intended to maintain the long-term viability and distribution of sage grouse in Montana.

3. Fire

Fire and livestock are key issues, which must be addressed to reverse the long-term trends of habitat loss/degradation and sage grouse population decline in Montana.

The FDP lists Fire as one of 12 major issues associated with sage grouse (FDP, Summary and Section VI). Section V (FDP, Page 46) clearly describes the potential impact fire can have on sagebrush habitats, requiring 30 years or more of recovery time. Fire is listed as a potential threat in each of the habitat segments across Montana (FDP, Section V). Section VI (Fire Management and Vegetation) describes the issues related to prescribed fire and wildfire and calls for consideration of cumulative effects of prescribed fire and a realization as to the long-term effects fire can have on sagebrush habitats. Although the State Sage Grouse Work Group is not in full agreement as to the uses of prescribed fire, the FDP calls for identifying objectives for manipulating vegetation, considering long-term effects on sage grouse, testing assumptions, and considering alternatives to prescribed fire that may achieve objectives in a manner that is more tolerable to sage grouse (Section VI, Fire Management).

4. General

The Final Draft Plan fails to ensure the conservation strategies that are discussed will be effective and implemented in a timely and sufficient manner (large enough area within specific seasonal habitats). The FDP did not outline specific regional areas or breeding complexes within these regions for specific implementation of suggested conservation strategies.

The Final Draft Plan sets broad objectives for maintaining and improving sage grouse populations and habitats (FDP, Section I). The Plan includes a description of 12 issues that occur at varying degrees across the sage grouse's distribution in Montana (FDP, Section VI). Each issue is accompanied with a list of potential conservation actions that may be used to reduce impacts or enhance habitats for sage grouse at a local level (FDP, Section VI). Agencies, individuals, and local working groups will work individually and cooperatively to determine what issues need addressing at a local level and what conservation actions are most appropriate for local circumstances (FDP, Section VIII). Because of the range of variability across Montana, this is a process that cannot be effectively accomplished in a statewide plan.

5. Grazing

Regarding late brood rearing habitat features (FDP, Table VII-2) herbaceous cover of perennial grasses and forbs is important and should be added to specify ≥ 8 " is suitable habitat, 5-8" is marginal, and <5 " is unsuitable [comment includes 4 lit citations on blue and ruffed grouse habitat]. Does the Department have any information that suggests less than 8" of herbaceous grass and forb cover is desirable late brood rearing cover?

Most sage grouse research has described late brood rearing habitat in terms of herbaceous or woody canopy cover or woody canopy height (FDP, Section IV). We are not aware of any scientific information that describes 8" grass and forb height as a minimum standard for sage grouse late brood rearing habitat. If that were a requirement, we believe sage grouse would occupy a much smaller portion of their current range. Generally speaking, late brood rearing areas are believed to be the least "limiting" of the sage grouse's annual habitat requirements (Jack Connelly, personal communication). That is, birds tend to range widely in their pursuit of succulent forbs and, by so doing, are capable of utilizing a variety cover types to meet their needs, including low areas and flood plains as well as artificial habitats adjacent to sagebrush cover such as hay meadows, alfalfa fields, and borrow ditches (FDP, Sections III and IV). As described in Section VII, herbaceous cover heights are also subject to drought, site potential, and vegetation type, and therefore height standards (as described for nest sites) must be used with caution.

Fire and livestock are key issues, which must be addressed to reverse the long-term trends of habitat loss/degradation and sage grouse population decline in Montana. The science which points out the significant impacts that livestock can have on ground nesting birds and their habitat, including riparian areas, has largely been ignored by those who drafted the FDP.

The FDP lists grazing management as one of 12 major issues associated with sage grouse conservation (Summary and Section VI). The Fine Scale habitat objectives (FDP,

Section I, Page 6) point out the effects of livestock grazing on vegetation characteristics. Agency commitments (FDP, Section II) include means for helping fund improvements for grazing, intended to benefit native vegetation and sage grouse. Section III (Page 38) includes a discussion on the types of conservation accomplishments FWP has been responsible for, including over a half-million acres of grazing systems. In our description of habitat, (FDP, Section IV, Page 39) we clearly point out that grazing is one of a number of variables that can affect sage grouse limiting factors. We describe domestic and wild herbivory (Section V) as having the potential for degrading habitats through continuous grazing or by not leaving sufficient residual cover. Overgrazing is further described as a risk in each of the habitat segments (FDP, Section V, Page 48). Section VI (FDP, Pages 55-59) includes issues related to livestock grazing and also identifies how prescriptive grazing can be used to improve native vegetation, enhancing sage grouse habitat. Again in Section VI (FDP, Pages 76-80) managing vegetation is tied, in part, to managing livestock and wild herbivory. We believe the FDP includes a thorough discussion as to both the potentially positive and negative effects of livestock grazing on sage grouse and their habitats.

More and more, private landowners are managing their lands or portions of their lands specifically for wildlife or other resource values. For these landowners, livestock production is a secondary goal to wildlife habitat management. The FDP fails to recognize the changing demographics and management objectives of many new and/or evolving private landowners. It makes absolute sense to specify the option of managing certain critical sage grouse habitats in the absence of livestock impacts. The FDP failed to discuss and outline the benefits of long-term protection from livestock impacts. On public lands, such an option should be stipulated as a goal or standard for at least some known sage grouse nesting and brood rearing areas. // The Final Draft Plan fails to identify some meaningful conservation strategies, such as Optimal Habitat Management Areas for sage grouse on a regional basis. Establishing at least one OHMA per region would provide a meaningful comparison upon which to monitor and evaluate the other proposed mitigation/conservation actions that largely aim to maintain status quo.

The Plan has sufficient flexibility to adapt to changing demographics as this comment describes. We strongly believe that, as has been demonstrated over the past 100 years, Montana does not need to make a choice between domestic livestock and sage grouse (FDP, Section VI, Page 55 and Appendix E, Page 11). Carefully managed domestic livestock grazing is entirely compatible with sustaining productive sage grouse populations in Montana. Although this continues to be the stance of FWP, these comments are largely directed at land management agencies that have partnered in developing the Final Draft Plan. Those agencies will have an opportunity to respond to these comments as the Final Plan is completed.

6. Habitat

Throughout the EA, most of the focus continues to be habitat conservation. A significant amount of funding is funneled through the Upland Game Bird Habitat Enhancement Program and with development of the Sagebrush Initiative, even more money will be spent to protect sagebrush habitat. Does this money equate to a direct increase in population? All sagebrush is not necessarily good sage grouse habitat. FWP should instead make incentive payments to landowners based on a demonstrated ability to increase populations or population trends,

allowing them to try different techniques in addition to grazing systems. // Maintenance and preservation of existing sage grouse habitat has already been tried by FWP and this has failed to reverse long-term downward trends, especially in SW Montana. // The focus of the plan is too much on habitat and that other factors that affect the Sage Grouse population are not really addressed as they should be. // Farming has not increased, but decreased (CRP has increased) and yet sage hens have disappeared. Therefore habitat is not the problem.

We have addressed similar comments in Appendix E, 9. Habitat. Sage grouse require sagebrush for meeting many year round needs (FDP, Sections III and IV) and although CRP has benefited many wildlife species, it is of limited value to sage grouse due to the general lack of sagebrush and other plant components such as edible forbs. Sage grouse no longer exist over portions of their range as a direct result of sagebrush grassland fragmentation and loss (Connelly and Braun 1997, Schroeder et al. 2000). Similar but smaller scale habitat losses have occurred in Montana (Section III and IV). Based on the experience of other states and historic as well as recent habitat losses in Montana, we believe that continued loss of sagebrush habitat can also jeopardize Montana's sage grouse populations. Currently, Montana is fortunate to retain a relatively large habitat base, supporting over 800 active leks (FDP, Section I). Given the circumstances across the sage grouse's range and in Montana, we believe the most important long-term contribution FWP can make to maintaining the current distribution of sustainable sage grouse populations is to facilitate maintaining and enhancing existing sage grouse habitats. Our intent with the Sagebrush Initiative is to protect basic habitat components (i.e., sagebrush, forbs, and grass) on a landscape-scale from what have historically been the greatest risks – prescribed fire, plowing, and herbicide treatments (FDP, Section III), using a voluntary, incentive-based approach. By clearly demonstrating the interest and ability to maintain functional sagebrush-grassland habitats, the program would also help avert the possible listing of sage grouse as threatened or endangered under the Federal Endangered Species Act.

We agree, however, that not all sagebrush is of equal importance. FWP has developed a prioritization process for considering which sagebrush-habitats associated with active leks and documented wintering areas provide the greatest benefit to sage grouse. If Montana proceeds with the Sagebrush Initiative, funding decisions would be based on interested owners of land with the highest ranked habitats. FWP is also interested in assisting with habitat improvements via grazing systems. Instead of incentive payments, as suggested by the comment, which can be very temporary in nature and difficult to ascertain a direct positive effect, we believe that landowners and sage grouse would more likely benefit from on-the-ground improvements such as fencing, wells, and pipelines that provide a means for following prescribed grazing patterns that are known to benefit vegetation, wildlife, and livestock (FDP, Section VI). Both FWP and NRCS have committed to making these types of projects a priority for conserving sage grouse habitat (FDP, Section II).

The Final Draft Plan does not currently protect any sage grouse habitat from the cumulative effects identified in the plan, especially during drought.

The FDP is not intended to ascribe specific protections to specific habitats. The FDP does, however, provide guidelines and conservation strategies to assist managers in identifying potential sage grouse issues and developing methods for addressing those issues. There is a strong potential for cumulative effects when managing resources that overlap with sage grouse

populations. Section V (FDP, Page 45) describes the cumulative effects of spraying and habitat conversion. Section VI describes the potential cumulative effects of prescribed fire and wildfire (FDP, Page 50), the potential cumulative effects of disturbance caused by recreation and monitoring (FDP, Page 73), and the potential cumulative effects of roads (FDP, Page 75). As various resource activities are reviewed, both NEPA and MEPA require that consideration be given to the cumulative effects of proposed new activities. Land management agencies will be given an opportunity to review this comment (and all other comments) to determine if additional guidance may be needed to clarify how the concept of cumulative impacts might be better recognized across all resource issues identified in the FDP, for the purpose of completing the Final Plan.

State and federal agencies have to stop burning and plowing remaining sagebrush. CRP should include sagebrush seeding requirements.

This comment involves issues primarily directed at land management agencies. The affected agencies will have an opportunity to respond to this comment as the Final Plan is completed.

The habitat and site studies your recommendations are based on are not pertinent to this area. Broad generalities applied over wide differing areas cannot be effective and will waste monetary resources. // Ecosystems change over time and habitat is only one component of the system. In our area the habitat is the most constant element of the ecosystem and yet sage grouse are not flourishing. In fact, the habitat has is much improved over the last 25 years.

The FDP lists 12 major issues pertinent to conserving sage grouse abundance and distribution in Montana (Summary and Section VI). Because the FDP is a statewide plan, it identifies a wide variety of habitat issues that likely are not pertinent to all areas. Agencies, individuals, and working groups at the local level will be responsible for identifying the issues that are most important to a particular area (FDP, Section VIII). By keeping the plan relatively general, implementation strategies can adjust over time to accommodate local changes in the ecosystem (Section VIII).

7. Hunting

Hopefully sportsman's interest in the decision about listing the sage grouse are looked at. Hunting of the sage grouse is not a real factor in their decline but predation and habitat are. // I support continued liberal hunting of sage grouse and encourage managers to use sage grouse hunters as a source of sage grouse population and distribution information. Upland bird hunters and their license fees have been the sole source of sage grouse conservation for the past 100 years. // The effects of hunting may be small but hunting is a form of mortality that we have control over. I think you should go one step further and consider a closed season. // Stop hunting sage grouse and prairie chickens, let them come back. If necessary, put them on the Endangered Species List. // We felt a No Hunting Alternative should have been included as one of the sage grouse management and conservation alternatives.

We have responded to similar comments in the FDP (Appendix E, Pages 18-20). Hunting sage grouse is an important activity in Montana and, based on lek counts and hunter telephone surveys, harvest levels are less than 10% of the population (FDP, Section IX), which are within the recommended guidelines for managing sage grouse populations (FDP, Appendix A). Lek survey information dating back to the early-1960s has not revealed any long-term declines in sage grouse abundance (EA, Figure 2). Over the same period, hunter harvest has declined substantially (FDP, Figure III-2, Page 31). As a result, we have no biological reason for closing a sage grouse hunting season at this time. However, if a threatening decline became apparent in a portion of the sage grouse's range in Montana, FWP would be obligated by statute to not open a season (EA, Chapter 2, Affected Environment, Sage Grouse Status, Legal Classification). It is also worth noting that within each alternative, the FWP Commission has the authority to not open a hunting season. This Revised EA includes specific criteria for not opening a hunting season (EA, Chapter 3).

8. Monitoring

We support development of a system to more accurately measure sage grouse abundance and distribution. It will be essential in the development to include various agencies along with private landowners. Many landowners will be able to provide historical data that will prove to be a great contribution to any system that is developed.

We agree that other agencies and individuals can play a significant role in inventorying and monitoring sage grouse leks. Landowners in particular can be a valuable source of information for describing lek locations and providing an historic perspective on sage grouse distribution and abundance. During the past 4 years, FWP has received valuable support from Bureau of Land Management, U.S. Forest Service, private organizations, individual volunteers, and landowners for developing a comprehensive database of sage grouse lek information across Montana.

Using trend areas would pick up variability caused by birds using a main lek and then moving to satellite leks.

We described long-term surveys of 4 trend areas in Montana (FDP, Section III, Page 37). As has been suggested, the trend areas provide a type of sage grouse trend information that is not available from single lek counts. We have committed in the FDP to continuing these surveys (Section II) and have also included them as a part of the No Action Alternative (i.e., status quo, EA, Chapter 3). Whereas trend areas provide high quality long-term data, the geographic areas represented are relatively small. The proposed statewide monitoring protocol (part of the Proposed Action Alternative), would serve a statistically reliable method for identifying statewide trends in abundance and distribution.

The Final Draft Plan does not establish a meaningful protocol for monitoring the effectiveness of proposed conservation actions.

In part, this comment would be served through development of a statewide monitoring protocol, as described in the Proposed Action Alternative (EA, Chapter 3). Annual lek surveys

results would be used to determine trends in sage grouse abundance and distribution, while ascertaining the effectiveness of implemented conservation actions. The FDP also calls for additional research to measure the effectiveness of conservation actions on sage grouse vital rates like mortality (Section VII, Page 97).

Following the monitoring protocol of 3 visits per lek in a season is very important, otherwise you face the possibility for variation in results.

Depending on the objective of the lek count, 3 visits may be very necessary (such as for a long-term trend area) or a single count may suffice for identifying new leks or to determine if a lek remains active (FDP, Appendix E, Page 21). The proposed statewide monitoring protocol, as described in the EA, Chapter 3, in combination with continued trend area surveys, would provide a broad statistically reliable measure of sage grouse population distribution and abundance trends over their range in Montana.

9. Population

The FDP and EA did not adequately distinguish important regional differences in sage grouse population data and habitat trends. In particular, SW Montana and the Shields Valley are in a dire situation, functionally isolated and fragmented from other larger sage grouse populations in Montana. I suggest adopting regionally appropriate conservation strategies that recognize these significant differences in population viability. // Given the loss of habitat and decline in sage grouse populations in Region 3, this area needs to adopt the highest level of protection and specify a focus on recovery.

We agree that considerable variation occurs across the sage grouse's range in Montana. The FDP describes specific issues that pertain to the Southwest Segment of the Mountain Foothills Mixed Sagebrush Ecotype (Section V). Specific management prescriptions at a local level will be based on conservation actions described in the FDP and as selected and adapted by agencies, individuals, and working groups.

10. Predation

The typical response to our concern about predators is, with good habitat, predators will not have an impact. We suggest FWP implement a program to control mammalian nest predators in areas that are below population objectives, but find additional funding to support the program. Redirecting half of coyote control funds is not a viable option. // The major change in the environment has been in predators. Bald eagles and raccoons are prevalent now whereas in the 60s and 70s it was rare to ever see these species. // The proposed action alternative makes no changes in the ecosystem except habitat. Therefore it will be no more effective than the No Action Alternative. Unless you spend some of the \$2.2 million dollars on predator control you might just as well stay home and we could save the money spent on your wages as well.

We agree that there are likely more predators occurring in sage grouse habitats than there has been historically (Section VI). As described in Section VI, Page 72, attempting to modify sage grouse vital rates to increase populations through predator control needs to be

evaluated in terms of need and cost effectiveness. Intensive and extensive predator control measures require substantial funding and public support. Given the vast nature of sage grouse nesting habitats, that may cover 30 or more square miles per lek, it is entirely possible that substantial resources directed toward predator control may not produce measurable results. There are examples where predator control has worked to improve nest success for some species (EA, Chapter 4, 2. Fish and Wildlife, High-Level Protection Alternative). These have typically been smaller, more intensively managed sites where predation was clearly demonstrated to have had a substantial impact on nest success. Also, during earlier times, predator control programs were subject to fewer regulations and likely enjoyed stronger public support than might be the case today (Section VI, Page 72). Because Montana's sage grouse habitats are generally productive and functional, they do not appear to be in need of predator control, which might be considered a stopgap measure. The goal of the FDP (Section I) is to "Provide for the long-term conservation and enhancement of the sagebrush steppe/mixed-grass prairie complex within Montana in a manner that supports sage grouse, a healthy diversity and abundance of wildlife species, and human uses." Rather than investing considerable resources into predator control programs that provide short-term (annual) results of variable magnitude, we believe limited resources for sage grouse should be directed at ensuring intact, functional sage grouse habitats are maintained. The latter effort would produce results that can continue to be built upon over time, ensuring long-term maintenance of sustainable sage grouse populations, which is necessary for averting federal listing.

11. Process

I did not receive an EA, but thought I was on every possible mailing list. When was it sent and who did it go to?

Copies of the First Draft EA and the Final Draft Plan were mailed out to over 400 people. In addition to mailings, the EA and Final Draft Plan were made available for download from FWP's website and were also distributed at local working group meetings in Dillon, Miles City, and Glasgow. The 33-day comment period ran from March 25-May 14, 2004. This Revised EA will be made available for an additional public comment period.

12. Vegetation

Money is proposed to be spent to protect large stands of sagebrush from any manipulation. This would lead to the demise of herbaceous understory that is essential for brood rearing and nesting, not to mention the building of catastrophic fuel loads. Sagebrush needs management not protection of old decadent stands, which the Montana Sagebrush Initiative will do in certain habitats.

Our intent with the Sagebrush Initiative is not to reduce management of habitats, but simply to protect the sagebrush, grass, and forb component from being manipulated in a way that is detrimental to sage grouse (e.g., prescribed fire, herbicide spraying, plowing). In response to these concerns about the Sagebrush Initiative, we have added the following wording to various locations in this Revised EA and will modify the our draft agreement to reflect this change: "Should vegetation conditions warrant, or new information become available, these

habitat protection agreements would allow for vegetation manipulation activities if they enhance sage grouse habitats and are agreeable between FWP and the cooperator." Also, livestock grazing would continue to be a compatible use of properties enrolled into the program. In fact, if there is a need for additional grazing management and the landowner was interested, FWP would consider partnering to assist with grazing improvements as part of developing a grazing system that manages for improved health of vegetation and habitat function for sage grouse while meeting the operator's needs (FDP, Sections II and VI). We have also added information on grazing in Chapter 3 of this revised EA to provide clarification.

Our ability to manage the resources we control has diminished dramatically as a result of Fish and Game MOU's and pressure on the land management agencies for single issue management. Start enhancing and quit protecting or you are going to lose the rancher, the open spaces and the wildlife habitat that supports the wildlife that pays your bills.

The EA analyzes the effects of 3 alternatives. To the best of our knowledge, none of the 3 is incompatible with livestock ranching. In fact, the No Action Alternative or current status includes funding assistance to help ranchers enhance their grazing operations. The proposed Sagebrush Initiative would provide an incentive payment to avoid sagebrush control measures while continuing to graze livestock as the operator sees fit. We believe that our voluntary, incentive-based approach to working with landowners will provide substantial conservation benefits for sage grouse and will be considerably less onerous than working with the federal Endangered Species Act (ESA) if the sage grouse were to be listed. While our approach is intended to provide conservation, we clearly also want to avoid ESA listing.

13. Weather

Winter weather in 2003/04 resulted in a 50% loss in game bird populations.

Weather is an overriding factor that can result in temporary population increases or declines, in spite of management activities (EA, Chapter 2). Our intent with the proposed actions is to manage for the long-term viability of sage grouse, realizing the populations will continue to rise and fall in a cycle, as has occurred historically (EA, Figure 2).

14. Local Working Groups

Throughout development of the sage grouse plan, a significant responsibility was placed on the local working groups. We recommend that FWP invest the necessary time, money and effort to make them successful. Without FWP support, the groups will be much less effective and will lose participation.

FWP has helped fund the local working group coordinator position and has played an active role in local working group meetings. We intend to continue to support the local working groups in this fashion (FDP, Sections II and VIII). In response to this comment, we have added some clarification to the description of the No Action Alternative (EA, Chapter 3).